Service Manual

DVCPRO

Digital Video Cassette Recorder

AJ-D250P

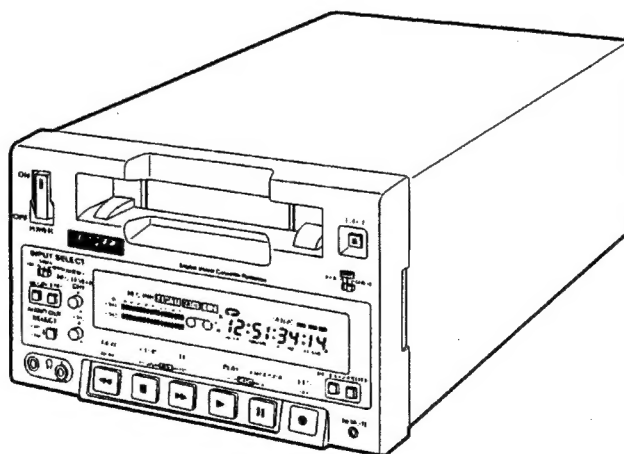| Sec.1 | Operating Instructions |
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V25289

Panasonic

Specifications

[GENERAL]

Supply voltage:	120 V AC, 50 – 60 Hz
Power consumption:	56 W

Ambient operating temperature:
41°F to 104°F (5°C to 40°C)
Ambient operating humidity:
35% to 80% (no condensation)
Weight:
14.3 lb (6.5 kg)
Dimensions (W×H×D):
8 7/16"×5 1/4"×15 7/16" (214×132×391 mm)
Recording format:
DVCPRO format
Recording tracks
Digital video/audio
Time code: recorded in sub-code area
Digital audio: 2 channels
Cue signal: 1 track
Control (CTL): 1 track
Tape speed:
33.820 mm/sec.
Recording time:
184 minutes (when an AJ-5P92LP is used *)
66 minutes (when an AJ-P66MP is used)

> *** For AJ-5P92LP cassette tapes, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.**

Tape used:
1/4" thin magnetic layer metal tapes
FF/REW time:
Less than 5 min. (using an AJ-5P92LP tape)

[VIDEO]

■Digital video
Sampling frequency:
Y: 13.5 MHz, P_B/P_R: 3.375 MHz
Quantizing:
8 bits
Error correction:
Reed-Solomon product code

■Analog composite IN/OUT
Video band:
Y: 30 Hz to 4.5 MHz (0 ±1 dB)
Y/C delay:
Less than 20 ns
K factor:
Less than 2%

■Input connectors
Line input:
BNC×1, 1.0 V_{P-P}, 75 Ω
REF VIDEO input:
BNC×1, 1.0 V_{P-P}, 75 Ω
S-VIDEO:
4P×1,   Y: 1.0 V_{P-P}, 75 Ω
C: 0.286 V_{P-P}, 75 Ω (burst level)

■Output connectors
Line output:
BNC×1, 1.0 V_{P-P}, 75 Ω
Monitor output:
BNC×1, 1.0 V_{P-P}, 75 Ω
S-VIDEO:
4P×1,   Y: 1.0 V_{P-P}, 75 Ω
C: 0.286 V_{P-P}, 75 Ω (burst level)

Specifications

[AUDIO]

■Digital audio
Sampling frequency:
48 kHz
Quantizing:
16 bits
Frequency response:
20 Hz to 20 kHz (0 +1.0 dB, −2.0 dB)
Dynamic range:
More than 85 dB
(1 kHz, emphasis OFF, "A" weighted)
Distortion:
Less than 0.1%
(1 kHz, emphasis OFF, reference level)
Crosstalk:
Less than −80 dB (1 kHz, between 2 channels)

■Input connectors
Line input (CH1/CH2):
PHONO×2, −8 dBV, 47 kΩ

■Output connectors
Line output (CH1/CH2):
PHONO×4, −8 dBV, 1 kΩ
Headphones output:
M3 stereo, variable level (max. −32 dBV or more), 8 Ω

[OTHER INPUT/OUTPUT CONNECTORS]

RS-232C:
D-sub, 25 pins, RS-232C interface
Wired remote control:
M2 jack (simple remote control)

[DISPLAY TUBE]

Counter:
8 digits (CTL/TC/UB display switching, remaining tape)
Audio level meter:
18 steps
Other:
REC/REC INH, REMOTE, WIDE, consumer-use cassette insertion display, REPEAT, SERVO, channel condition, cassette insertion display

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

SAFETY PRECAUTIONS

ENERAL GUIDELINES

When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.

After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are property installed.

After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

EAKAGE CURRENT COLD CHECK

. Unplug the AC cord and connect a jumper between the two prongs on the plug.

. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between $1M\Omega$ and $5.2M\Omega$.

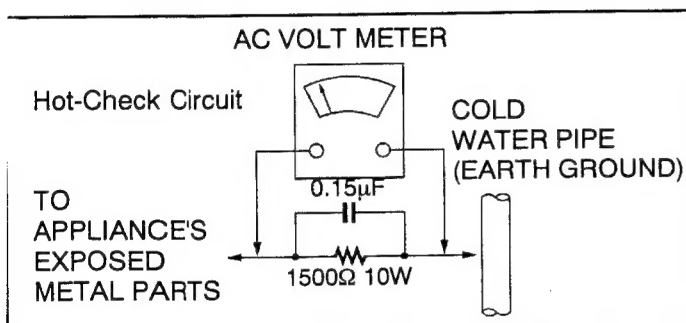When the exposed metal does not have a return path to the chassis, the reading must be ∞.

Figure 1

_EAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet.
   Do not use an isolation transformer for this check.

2. Connect a $1.5k\Omega$, 10W resistor, in parallel with $0.15\mu F$ capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.

3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.

4. Check each exposed metallic part, and measure the voltage at each point.

5. Reverse the AC plug in the AC outlet repeat each of the above measurements.

6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 millilamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
   Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).

7. Immediately before removing the protected material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwize harmless mother such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

X-RADIATION

WARNING

1. The potential source of X-Radiation in EVF sets is the High Voltage section and the picture tube.

2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing X-Radiation.

NOTE: It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electric type) reading should indicate 2.5kV, $\pm0.15kV$. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

CONTENTS

SECTION 1

OPERATING INSTRUCTIONS

CONTENTS

Introduction

The AJ-D250 is a digital VTR which uses 1/4" wide tapes. The incorporation of digital compression technology ensures that the deterioration in picture and sound quality suffered during dubbing will be much less than with conventional analog systems.

The model has a compact and lightweight design, enabling it to be readily carried about or easily installed in a rack.

The interactive system, which is featured for the unit's settings, enables these settings to be performed while viewing the menus on the TV monitor screen.

The model AJ-D250 comes with an RS-232C connector which makes it possible to control the editing operations and exercise remote control from a computer using the RS-232C remote control (AJ-A250 - available as an optional accessory).

Features

Compact and light
This unit is 8 $^7/_{16}$" (214 mm) wide, 5 $^1/_4$" (132 mm) high and 15 $^7/_{16}$" (391 mm) deep, and weighs 14.3 lb (6.5 kg). It is equipped with grips so that it can be carried easily.

Assemble editing and insert editing
Using the RS-232C remote control (AJ-A250 - available as an optional accessory), two units—one a player and the other a recorder—can be controlled directly from the remote control to perform editing operations.

Encoder control
The video output signals can be adjusted using the items on the setup menus.

2-channel digital audio with high sound quality

RS-232C control
Use of the RS-232C remote control (AJ-A250 - available as an optional accessory) enables not only editing operations to be performed but remote control can also be exercised, from a computer by connecting the RS-232C cable between from the computer and this VTR.

Up to 184 minutes of recording
The unit uses two types of cassette tapes: one for news gathering (max. 66 minutes) and the other for general-purpose applications (184 minutes: using AJ-5P92LP *).
The unit's compact design accommodates tapes with a 1/4" width.

> * For AJ-5P92LP cassette tapes, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

Compatible with consumer-use equipment
Using the cassette adapter (AJ-CS750P: optional accessory), consumer-use cassette tapes shot using a consumer-use digital camera can be played back on this unit. The LP mode is not supported.

Time codes
The unit comes with a built-in time code generator (TCG)/time code reader (TCR).

Repeat playback
Any section on a tape can be played back repeatedly for an unlimited number of times or one time only.
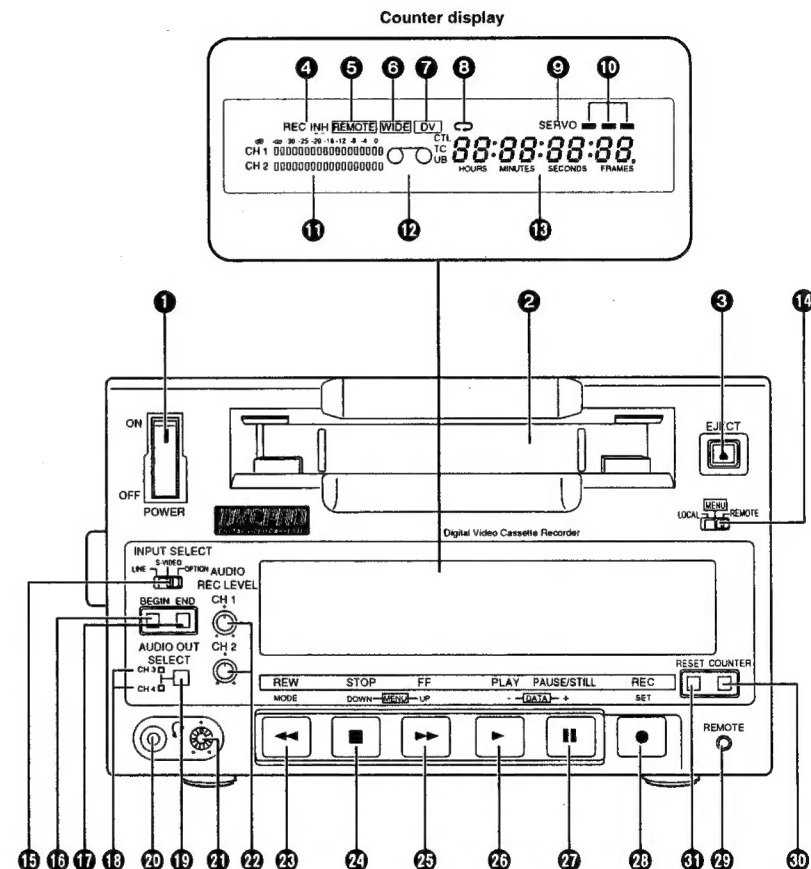
Menu-driven setup
The unit's settings are performed using an interactive system while viewing the menus on the TV monitor screen.

Remote control
The unit can be operated from distances up to 5 meters away when the AG-A11 remote control (optional accessory) is connected.

Parts and Their Functions

Front panel

Counter display

Parts and Their Functions

Front panel

❶ POWER switch
When the ON side is pressed, power is supplied to the unit, and the counter display is illuminated.

❷ Cassette insertion slot
News gathering cassettes, general-purpose cassettes and consumer-use cassettes accompanied by the adapter are inserted into this slot. Consumer-use cassettes can be used for playback only.

❸ EJECT button
When this button is pressed, the tape is unloaded, and a few seconds later it is automatically ejected.
If the counter display is set to the CTL display, the display will be reset.

❹ REC/REC INH lamp
REC: The lamp lights during recording.
REC INH: The lamp lights when the accidental cassette erasure prevention status is established.
It also lights when "ON" is selected as the "REC INHIBIT" setting on the setup menu.
Recording cannot be conducted while this lamp is lighted.

❺ REMOTE lamp
This lamp lights when the LOCAL/MENU/REMOTE switch has been set to REMOTE.

❻ WIDE lamp
This lamp lights in the 16:9 wide screen mode.

❼ Consumer-use cassette insertion lamp
This lamp lights when a cassette recorded using a consumer-use DV device has been inserted.

❽ REPEAT lamp
This lamp lights during repeat playback.

❾ SERVO lamp
This lamp lights when the drum servo and capstan servo are locked.

❿ Channel status lamps
One of these lamps lights depending on the error rate status. (Green → Blue → Red)
Green: This lamp lights when the error rate for both the video and audio playback signals is at an acceptable level.
Blue: This lamp lights when the error rate for either the video or audio playback signals has deteriorated. A normal playback picture appears even when the lamp is lighted.
Red: This lamp lights when either the video or audio playback signals have become subject to correction or interpolation.

⑪ Level meter
This indicates the levels of the audio signals.
During recording or E-E selection, it indicates the audio input signal levels; during playback, it indicates the audio output signal levels.

⑫ Cassette insertion lamp
This lamp lights when a cassette has been inserted into the unit.

⑬ Counter display
The time codes, CTL count values and on-screen information and other messages appear on this display.

⑭ LOCAL/MENU/REMOTE switch
This switch is set when the menu settings are to be performed or when the unit is to be controlled from an external source.
LOCAL: Set here when the unit is to be controlled using the controls provided on the unit's operation panel.
MENU: Set here when the on-screen menu items are to be set.
REMOTE: Set here when the unit is to be controlled using the RS-232C interface or other external control device.

⑮ INPUT SELECT switch
This is used to select the input signals.
LINE: Set here to record the signals which are supplied to the video signal input connector.
S-VIDEO: Set here to record the signals which are supplied to the S-VIDEO input connector.
OPTION: Set here to supply video and audio signals from the optional board and record them.

⑯ BEGIN button
This button sets the start point for repeat playback and it indicates the start point which is currently entered.

⑰ END button
This button sets the end point for repeat playback and it indicates the end point which is currently entered.

⑱ CH3/CH4 lamps
These lamps light when the audio signals have been set to CH3 and CH4 during DV format playback.

⑲ AUDIO OUT SELECT button
This button selects the audio signals which are to be output.

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Parts and Their Functions

⑳ Headphones jack
When headphones are connected to this jack, they can be used to monitor the sound being recorded or played back.

㉑ Volume control
This is used to adjust the volume to the headphones.

㉒ Audio recording level controls
These controls are used to adjust the recording level for PCM audio signals CH1 and CH2.

㉓ REW button
When this button is pressed, the tape is rewound, and the playback pictures can be monitored if "TAPE" has been selected for the "S/F/R EE SEL" setup menu item setting.

㉔ STOP button
When this button is pressed, the tape stops traveling, and the still picture can be monitored when the "TAPE" setting has been selected for the "S/F/R EE SEL" setup menu item.
In the stop mode, the drum still continues to rotate, and the tape remains tightly wrapped around the drum.
When the designated period of time has elapsed in the stop mode, the unit is automatically set to the standby OFF mode in order to protect the tape.

㉕ FF button
When this button is pressed, the tape is fast-forwarded, and the playback pictures can be monitored if "TAPE" has been selected as the "S/F/R EE SEL" setup menu item setting.

㉖ PLAY button
When this button is pressed, playback is commenced.
Recording is commenced when it is pressed together with the REC button.

㉗ PAUSE/STILL button
When this button is pressed during recording, recording is stopped temporarily. When it is pressed again, recording is resumed.
When this button is pressed during playback, the still picture mode is established. When it is pressed again, playback is resumed.

㉘ REC button
Recording is commenced when this button is pressed together with the PLAY button. When it is pressed during playback or in the STOP mode or standby OFF mode, the REC CHECK mode is established. (See page 15)

㉙ REMOTE connector
When the remote control (AG-A11) is plugged into this connector, the unit can be operated at a distance using the controls on the remote control instead of the unit's function buttons.
Keep the LOCAL/MENU/REMOTE switch at the REMOTE position.

(AG-A11)
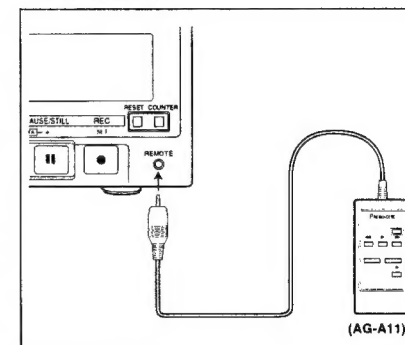
㉚ COUNTER button
This button is used to switch the counter display.
CTL: Set here to display the tape timer (control signal).
TC: Set here to display the time code.
UB: Set here to display the user's bit.
Remaining tape:
Set here to display the amount of remaining tape.

㉛ RESET button
When this button is pressed in the CTL mode, the counter display is reset to 00:00:00:00.

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Parts and Their Functions
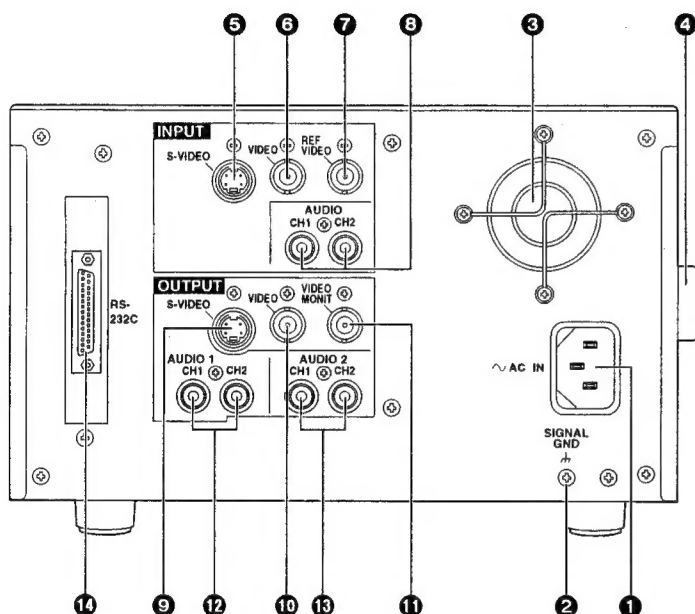
Connector panel

Parts and Their Functions

Connector panel

❶ AC IN socket
Plug one end of the unit's power cord into this power socket.

❷ SIGNAL GND terminal
In order to reduce noise, connect this terminal to the signal grounding terminal on one of the devices to which the unit is connected. This is not a safety ground.

❸ Fan motor
This motor is used to cool the unit.

❹ Grip
This grip is fitted on the side panel. When operating the unit, however, place the unit flat on its bottom surface.

❺ S-VIDEO IN connector
The S-VIDEO video signals are supplied to this connector.

❻ VIDEO IN connector
The analog video signals are supplied to this connector.

❼ REF VIDEO IN connector
This is connected to the reference video signal when the unit is to be synchronized with the reference sync signals of an external unit during playback.

❽ AUDIO IN connectors
The analog audio signals are supplied to this connector.

❾ S-VIDEO OUT connector
The S-VIDEO video signals are output from this connector.

❿ VIDEO OUT connector
The analog video signals are output from this connector.

⓫ MONITOR OUT connector
The video monitor signals are output from this connector. Superimposed video signals can be output.

⓬ AUDIO 1 OUT connectors
The analog audio signals are output from this connector.

⓭ AUDIO 2 OUT connectors
The analog audio signals are output from this connector.

⓮ RS-232C connector
Editing operations can be conducted speedily and efficiently by connecting the RS-232C remote control (AJ-A250 - available as an optional accessory) to this connector. Various operations can be performed from a computer by using the RS-232C cable which is available as an optional accessory.

RS-232C connector

Tapes

Tape	Description
Consumer-use cassettes (S cassette)	These tapes are designed to be used exclusively with consumer-use camera recorders. They can be used only for playback on this unit and only with the cassette adapter (optional accessory). Long-playing tapes (80 min. in standard mode, 120 min. in LP mode) cannot be used with this unit. **It is recommended that Panasonic brand consumer-use DV tapes be used.** Remember that inserting a cassette tape without using the cassette adapter can cause malfunctioning.
M cassettes	Tapes with up to 66 minutes of recording/playback time (AJ-P12MP, AJ-P24MP, AJ-P33MP, AJ-P46MP, AJ-P66MP)
L cassettes	Tapes with up to 184 minutes of recording/playback time (AJ-P34LP, AJ-P66LP, AJ-P94LP, AJ-P126LP, AJ-5P92LP *) ***For AJ-5P92LP cassette tapes, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.**
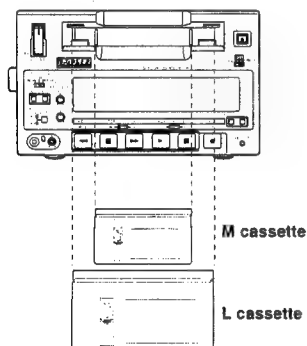
Align the cassette with the center of the insertion slot, and push it in gently.
The cassette tape is loaded automatically.

M cassette

L cassette

<Checkpoints for consumer-use DV tape playback>
- Consumer-use DV tapes can be used for playback only.
- Consumer-use tapes recorded in the LP mode cannot be played back.
- Recording onto consumer-use tapes is not possible, therefore the recording-related functions are inhibited.
- The maximum speed at which consumer-use tapes can be forwarded or reversed is 32 times normal tape speed.
- The still pictures of consumer-use tapes are subject to disturbance.
- In the interest of protecting the tapes, it is recommended that consumer-use tape cue-up be kept to the minimum extent possible.
- The maximum time for the STILL TIMER when a consumer-use tape is used has been set to 10 seconds.
  When the unit has been left standing in the STILL mode, the standby OFF (half loading) mode will be established after one minute has elapsed.
- During consumer-use tape search and still picture operations, a display indicating that the time code cannot be read may appear.

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Operation

Turning on the power/inserting a cassette

Before proceeding to operate the unit, make sure that the unit has been connected properly.

1 Turn on the unit's power.

2 Insert the cassette tape.
Insert it at the prescribed position without forcing it in any way.

3 Check that the STOP lamp is lighted.
When the tape is inserted, the cylinder starts rotating automatically, the tape is loaded, and the STOP mode is established.
<Note>
It is possible to change the mode when a tape is inserted using the settings in Item No. 104 "TAPE IN MOD" of the Setup menu. (See page 29)
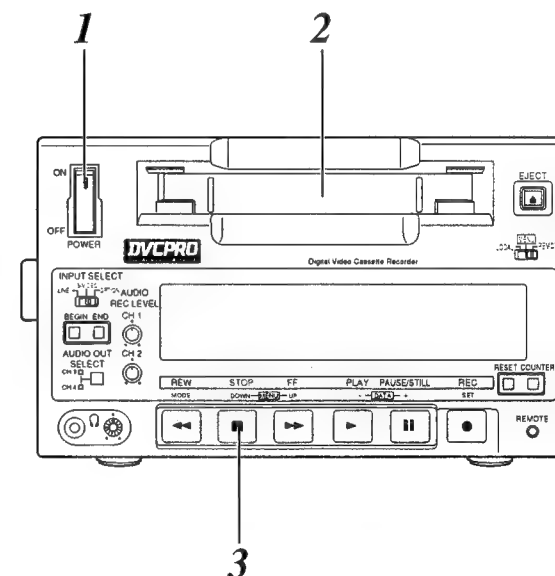
Operation

STOP mode

1 **When the STOP button is pressed, the STOP mode is established.**
The STOP lamp lights, and the tape stops traveling.
- In order to protect the tape, the tape protection mode will be established when the time selected for the "STILL TIMER" setup menu item setting has elapsed. (See page 31) When the STOP, REW, FF or PLAY button is pressed, the corresponding mode will be established.

<Checkpoint for STILL TIMER setting>
- Repeatedly using the same locations on the same tape will increase the cumulative standby time at those locations. In the interest of protecting the tape, keep the standby times at the same locations as short as possible.
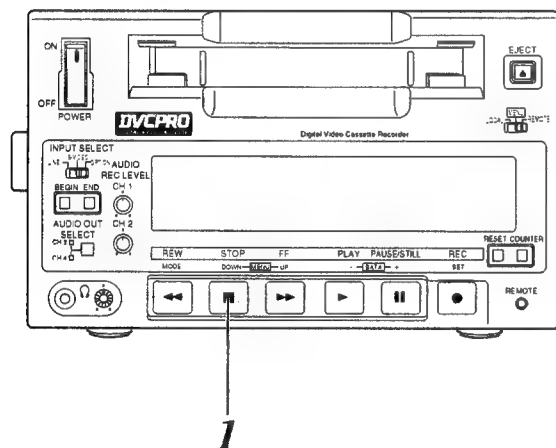
Operation

Recording

1 **Set the accidental erasure prevention tab on the cassette tape to "recording," and insert the tape.**

2 **Press the STOP button to set the unit to the STOP mode.**

3 **Check that the REC INH lamp has gone off.**

4 **Selecting the video and audio input signals and adjusting the audio levels**

   4-1 **Selecting the video and audio input signals**
     1 Connect the signals which are to be recorded.
     2 Select the input signals using the INPUT SELECT switch on the front panel.

   4-2 **Adjusting the audio levels**
     1 Adjust the levels of the audio input signals.
       The audio signals are recorded at the proper levels when the level controls are at their center-click positions.

5 **Press the PLAY button while holding down the REC button.**
The REC and PLAY lamps light and recording commences.

6 **Press the STOP button to end the recording.**
The recording now ends, and the STOP mode is established.

<Notes>
- If recording prevention signals are included among the input signals, the input signals will not be recorded properly.
- Check that the SERVO lamp has lighted during recording. The image which is played back will be disturbed if the lamp is flashing or off.

Operation

Pause/record (frame-to-frame continuity)

1 **Press the PAUSE/STILL button while the cassette tape is playing.**
When ON has been selected as the AUTO BACK setup menu item setting, the tape will be rewound for about 2 seconds starting from the position where the PAUSE/STILL was pressed. (See page 29)

2 **Press the REC button to set the unit to the REC PAUSE mode.**
The monitor display now switches to the E-E screen.

3 **Press the PAUSE/STILL button to commence recording.**
The tape travels to the position where the PAUSE/STILL was pressed in step *1* above, and recording commences.
<Note>
The E-E screen is now displayed.

Playback

1 **Insert the cassette tape.**

2 **Press the PLAY button.**
Normal playback is now commenced.

3 **Press the STOP button to end the playback.**
The unit is now set to the STOP mode.

<Note>
Check that the SERVO lamp has lighted during playback. The playback image will be disturbed if the lamp is off or flashing.

Cue/review

Hold down the FF or REW button during playback.
While this button is pressed, the tape will be cued or reviewed at about 10 times the normal tape speed.
Normal playback is restored when the button is released.
● When ON has been selected as the SEARCH CUE setup menu item setting, the CUE track sound will be output during cue or review. (See page 34)

Still picture playback

Press the PAUSE/STILL button during playback.
Normal playback is restored when the PAUSE/STILL button is pressed again.
● No sound will be heard during still picture playback.

Operation

Frame by frame advance

When the FF or REW button is pressed during still picture playback, the tape will be advanced forward or backward one frame at a time.
● No sound will be heard during frame by frame advance.

Audio switching

The AUDIO OUT SELECT button is used to switch to the desired sound.
By pressing this button, the audio output is switched to the modes in the sequence shown below.

Mode	AUDIO OUT connectors		Display tube	LED
	CH1 output	CH2 output		
A	CH1	CH2	CH1 CH2	CH3 ☐ CH4 ☐
B	CH1		CH1	CH3 ☐ CH4 ☐
C	CH2		CH2	CH3 ☐ CH4 ☐
D	CH3	CH4	No display	CH3 ■ CH4 ■
E	CH3		No display	CH3 ■ CH4 ☐
F	CH4		No display	CH3 ☐ CH4 ■
G	CH1+CH3	CH2+CH4	CH1 CH2	CH3 ■ CH4 ■

The settings in the boxes (▨) are valid only during DV format 4-channel mode playback.

☐········OFF
■········ON

Sequence in which the modes are selected
→ A → B → C → D → E → F → G →

REC CHECK

By pressing the REC button during playback or in the STOP or STANDBY OFF mode, it is possible to check the audio input signals, time code generator value and the video input signals which have been selected using the INPUT SELECT switch.

● **REC CHECK during playback**
The REC CHECK mode is established while the REC button is held down. Normal playback is restored when the button is released.
● **REC CHECK in the STOP or STANDBY OFF mode**
The REC CHECK mode is established when the REC button is pressed. To release the mode, press the STOP button.

Repeat playback

Setting the BEGIN and END points
[Menu mode]

1 Set the unit to the menu mode (by setting the LOCAL/MENU/REMOTE switch to the MENU position).

2 Select the "BGN PRESET" or "END PRESET" setup menu item, and press the DATA+ button (PAUSE/STILL button) or DATA– button (PLAY button).
(See page 29)
<Note>
It is possible to select whether the BEGIN or END point is to be set or not by operating the DATA+ or DATA– button.

3 Select TC or CTL using the COUNTER button.
<Note>
If the RESET button is pressed while the unit is in CTL mode, 00:00:00:00 will be set.

4 Select the digit to be changed (blinking display) using the UP button (FF button) or DOWN button (STOP button).
The frame digits cannot be selected. They always appear as "00."

5 The value is incremented or decremented using the DATA+ button (PAUSE/STILL button) or DATA– button (PLAY button).

6 Press the SET button (REC button) upon completion of the settings.
The settings are now stored in the memory.

7 Set the LOCAL/MENU/REMOTE switch to the LOCAL or REMOTE position.

<Notes>
● "– –:– –:– –:– –" appears on the display when the points have not been set. In this case, repeat playback will start at the beginning of the tape which serves as the BEGIN point and end at the end of the tape which serves as the END point.
● When the MODE button (REW button) is pressed instead of the SET button upon completion of the settings, the time code setting will be canceled.

Setting the BEGIN and END points
[Front panel]

1 Set the unit to the local mode (by setting the LOCAL/MENU/REMOTE switch to the LOCAL position).

2 When the BEGIN or END button on the front panel is pressed, the current position is set as the BEGIN or END point.

Displaying the BEGIN and END points

1 Set the unit to the remote mode (by setting the LOCAL/MENU/REMOTE switch to the REMOTE position).

2 When the BEGIN or END button on the front panel is pressed, the BEGIN or END point is displayed while the button is held down.
The settings are not changed.

Setting the repeat playback mode

1 Set the unit to the menu mode (by setting the LOCAL/MENU/REMOTE switch to the MENU position).

2 Select the "MEMORY MODE" setup menu item, and select the repeat playback mode. (See page 29)

Setting	Operation
OFF	Normal operation
M-STOP	The tape stops near the BEGIN point when it is fast-forwarded or rewound.
REPT1	When the tape playback reaches the END point, the tape is rewound to the BEGIN point, where it stops.
CONT	When the tape playback reaches the END point, the tape is rewound to the BEGIN point and playback is repeated.

3 Set the LOCAL/MENU/REMOTE switch to the LOCAL or REMOTE position.

<Notes>
● The picture quality will deteriorate when the same tape is repeatedly played back over and over again. As a general guideline, replace the tape with a new one after about 100 repeat playback operations.
● When repeat playback is to be initiated using a consumer-use tape, the unit will not operate even if CONT has been selected as the setup menu item No.111 "MEMORY MODE" setting. (See page 29)

Time codes

Time codes are used when recording time code signals generated by the time code generator on the tape, reading out their values with the time code reader, and displaying the absolute positions of the tape in increments of hours, minutes, seconds and frames.

The time codes are written in the sub-code area (data area) of the helical track. For this reason, they can be read at any playback speed from the stop mode to slow-motion playback or high-speed playback.
The time code value is indicated on the display or superimposed.

TCR 00 :   07 :   04 :   24
     ↑   ↑   ↑   ↑
   Hours Minutes Seconds Frames

User's bit

The user's bit is the 32-bit (8-digit) data frame in the time code signal which is made available to users. It can record operator numbers, etc.

The characters which can be used for the user's bit are 0 to 9 and A B C D E F.

1–8

Setting the time code

1 Set the unit to the menu mode (by setting the LOCAL/MENU/REMOTE switch to the MENU position).

2 Select the "TC PRESET" setup menu item, and press the DATA+ button (PAUSE/STILL button) or DATA– button (PLAY button).
(See page 32)

3 Select the digit to be changed (blinking display) using the UP button (FF button) or DOWN button (STOP button).

4 The value is incremented or decremented using the DATA+ button (PAUSE/STILL button) or DATA– button (PLAY button).

5 Press the SET button (REC button) upon completion of the settings.

6 Set the LOCAL/MENU/REMOTE switch to the LOCAL or REMOTE position.

<Notes>
● The current time code value appears as the default value.
● When the RESET button is pressed while the digit to be changed is blinking, the display is reset to "00:00:00:00."
● The time code cannot be set unless P-REC or P-FREE has been selected as the "TC MODE" setup menu item setting. (See page 32)
● If the MODE button (REW button) is pressed instead of the SET button while the digit to be changed is blinking, the time code setting will be canceled.

Setting the user's bit

1 Set the unit to the menu mode (by setting the LOCAL/MENU/REMOTE switch to the MENU position).

2 Select the UB PRESET setup menu item, and press the DATA+ button (PAUSE/STILL button) or DATA– button (PLAY button).
(See page 32)

Now follow the same procedure as for setting the time code.

Time Codes and User's Bit

Playing back the time code/user's bit

1 Set the unit to the STOP mode.

2 Set to TC or UB using the COUNTER button.
TC: The time code appears on the display.
UB: The user's bit appears on the display.

● Interpolation is provided by the CTL signal if the time code cannot be read.

3 Press the PLAY button.
Playback is commenced, and the time code appears on the display.
When ON has been selected as the SUPER setup menu item setting, the time code value will be superimposed onto the video signals which are output from the MONITOR OUT connector. (See page 28)

<Notes>
● The colon between the seconds and frames changes to a period when a drop frame time code is read.
● Interpolation is automatically provided by the CTL signal if the time code signal is missing.
The display appearing at this time will be as shown below.

T * R   00 : 07 : 04 : 24

The colon between the seconds and frames changes to a period in the case of a drop frame.

" * " appears here when the time code signal is missing.
(Superimpose only)

Superimposed Screens

When the unit's MONITOR OUT connector has been connected to a TV monitor, the control signals, time codes, etc. are displayed on the TV monitor screen as abbreviations.
The display can be switched ON or OFF using the setup menu item No. 000 setting. (See page 28)

TV monitor

No display:
Normally, no display
S: Appears with FAN STOP.
L: Appears with LOW RF.
N: Appears with NO RF.

Abbreviation
CTL: control signal
TCR: time code playback value
UBR: user's bit playback value
REM: remaining tape amount
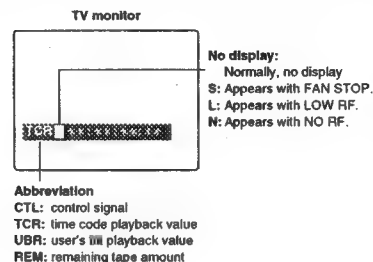
Characters displayed
The background of the characters superimposed onto the display can be changed using the setup menu item No.004 "CHARA TYPE" setting. (See page 28)

TV monitor   TV monitor
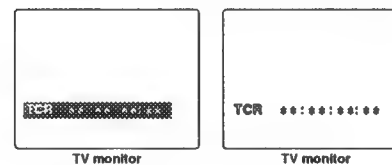
Display position
The position where the superimposed display appears can be changed using setup menu item No.002 "CHARA H-POS" and No.003 (CHARA V-POS).
(See page 28)

TV monitor   TV monitor
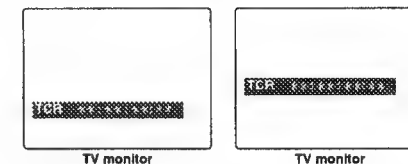
<Note>
When the MODE button and the DATA+ button or DATA– button are pressed, the counter display appears temporarily while the buttons are held down so that the setting can be checked.
Even while the MODE button is held down, settings can still be performed using the DATA+ button or DATA– button as the actual status is checked.

1-9

Superimpose Screens

Operation mode
The value to be displayed can be selected using setup menu item No.001 "DISPLAY SEL".
(See page 28)

TIME: Counter value
T&STA: Counter value and VTR operation mode
T&R: Counter value and remaining tape amount
T&S&R: Counter value, VTR operation mode and remaining tape amount

TIME mode

Counter value

TV monitor

T&STA mode

Counter value
VTR operation mode

TV monitor

T&R mode

Counter value
Remaining tape amount

TV monitor

T&S&R mode

Counter value
VTR operation mode
Remaining tape amount

TV monitor
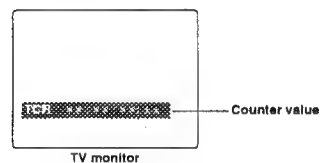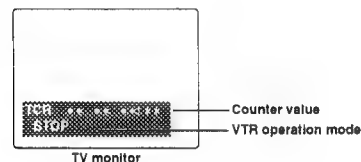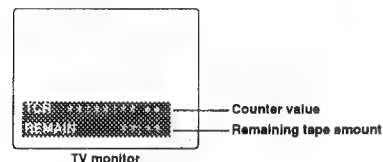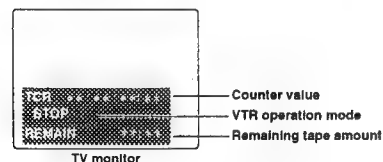
<Notes>
One of the following errors may be displayed on the third line (remaining tape amount line) in the T&S&R mode. (See page 74)

[NO RF]:
This appears when a blank part has been detected on the tape.
"E-09" appears on the front panel's counter display.

[LOW RF]:
This appears when there is no head output.
"E-01" appears on the front panel's counter display.

[FAN STOP]:
This appears when the cooling fan has shut down.
"E-70" and the counter value appear alternately on the front panel's counter display.

[SERVO NOT LOCKED]:
This appears when the servo is not locked.
"E-00" appears on the front panel's counter display area.

Setup (Initial Settings)

The unit's main settings can be performed and checked using the on-screen menus which appear on the video monitor connected to the unit.
It is also possible to perform and check the settings using the item numbers and setting numbers which appear on the front panel's display.
One user setting memory set is provided with the unit to enable the desired settings to be stored in the memory ahead of time for use.

How to perform the settings using the on-screen menus

1 Set the LOCAL/MENU/REMOTE switch to the MENU position.
The unit is now set to the menu setting mode, and the menu screen appears on the video monitor.

```
SET-UP MENU       MAIN
                        NO.00
    *  00 SYSTEM
      000 BASIC
      100 OPERATION
      200 INTERFACE
      400 TAPE PROTECT
      500 TIME CODE
      600 VIDEO
      700 AUDIO
      END
```

In the menu setting mode, the REW, STOP, FF, PLAY, PAUSE/STILL and REC buttons serve as the MODE, MENU-DOWN, MENU-UP, DATA−, DATA+ and SET buttons.

2 Press the MENU-UP button or MENU-DOWN button to move the cursor (*) to the menu where the changes are to be made.

3 Press the SET button to set the item.
To return to the menu screen, press the SET button while holding down the MODE button.

4 Press the MENU-UP button or MENU-DOWN button to move the cursor (*) to the item where the changes are to be made.
The page can be scrolled up or down by pressing the MENU-UP button or MENU-DOWN button while holding down the MODE button.

5 Press the DATA+ or DATA− button to change the setting.
The setting value will flash while changes to the setting are being performed.

6 Press the SET button to enter the setting.
To change another item, repeat steps *4*, *5* and *6*.
<Note>
The setting can be canceled by pressing the MODE button. To change another item without entering a setting, press the MODE button, and repeat steps *4*, *5* and *6*.

7 Set the LOCAL/MENU/REMOTE switch to the LOCAL or REMOTE position.
The menu setting procedure is now terminated.

How to restore the factory settings

1 Set the LOCAL/MENU/REMOTE switch to the MENU position.
The unit is now set to the menu setting mode, and the menu screen appears on the video monitor.

2 Press the RESET button.
The unit is set to the default setting mode, and the default setting screen appears on the video monitor.

```
SELECT        MODE
        *    ESCAPE
             LOAD
             SAVE
             PROTECT
```

Setup (Initial Settings)

3 Press the MENU-UP button or MENU-DOWN button to position the cursor at LOAD, and press the SET button.
The unit is set to the LOAD mode, and the LOAD screen appears on the video monitor.

```
SET-UP MENU      <LOAD>
        * NO
          FACTORY (ALL)
          FACTORY (NOT SYSTEM)
          USER (ALL)
          USER (NOT SYSTEM)
```

4 Press the MENU-UP button or MENU-DOWN button to move the cursor to FACTORY (ALL), and press the SET button.
● If the cursor is moved to FACTORY (NOT SYSTEM) and this operation is performed, all the menus except the SYSTEM menu will be restored to the factory settings.
● If the cursor is moved to NO and this operation is performed, operation will return to the menu screen without restoring the factory settings.

5 Set the LOCAL/MENU/REMOTE switch to the LOCAL or REMOTE position.
The menu setting procedure is now terminated.

How to set the user default settings

1 Set the LOCAL/MENU/REMOTE switch to the MENU position.
The unit is now set to the menu setting mode, and the menu screen appears on the video monitor.

2 Performs steps *2* through *6* of "How to perform the settings using the on-screen menus," and change to the desired settings. (See page 23)

3 Press the RESET button.
The unit is set to the default setting mode, and the default setting screen appears on the video monitor.

```
SELECT        MODE
       *      ESCAPE
              LOAD
              SAVE
              PROTECT
```

4 Press the MENU-UP button or MENU-DOWN button to position the cursor at SAVE, and press the SET button.
The unit is set to the SAVE mode, and the SAVE screen appears on the video monitor.

```
SET-UP MENU      <SAVE>
        * NO
          USER (ALL)
          USER (NOT SYSTEM)
```

5 Press the MENU-UP button or MENU-DOWN button to move the cursor to USER (ALL), and press the SET button.
● If the cursor is moved to USER (NOT SYSTEM) and this operation is performed, all the menus except the SYSTEM menu will be updated.
● If the cursor is moved to NO and this operation is performed, operation will return to the menu screen without updating the settings.

6 The screen to confirm whether SAVE is to be initiated or canceled now appears. Press the MENU-UP button or MENU-DOWN button to move the cursor to the YES position, and press the SET button.
The settings are now saved in the memory.

```
SAVE OK?
        * NO
          YES
```

7 Set the LOCAL/MENU/REMOTE switch to the LOCAL or REMOTE position.
The menu setting procedure is now terminated.

Setup (Initial Settings)

How to load the user default settings

1 Set the LOCAL/MENU/REMOTE switch to the MENU position.
The unit is now set to the menu setting mode, and the menu screen appears on the video monitor.

2 Press the RESET button.
The unit is set to the default setting mode, and the default setting screen appears on the video monitor.

```
SELECT        MODE
       *      ESCAPE
              LOAD
              SAVE
              PROTECT
```

3 Press the MENU-UP button or MENU-DOWN button to position the cursor at LOAD, and press the SET button.
The unit is set to the LOAD mode, and the LOAD screen appears on the video monitor.

```
SET-UP MENU      <LOAD>
        * NO
          FACTORY (ALL)
          FACTORY (NOT SYSTEM)
          USER (ALL)
          USER (NOT SYSTEM)
```

4 Press the MENU-UP button or MENU-DOWN button to move the cursor to USER (ALL), and press the SET button.
● If the cursor is moved to USER (NOT SYSTEM) and this operation is performed, the user settings for all the menus except the SYSTEM menu which are saved in the memory will be used for operation.
● If the cursor is moved to NO and this operation is performed, operation will return to the menu screen without any changes made to the user settings which are saved in the memory.

5 Set the LOCAL/MENU/REMOTE switch to the LOCAL or REMOTE position.
The menu setting procedure is now terminated.

How to initiate the menu protect mode

By setting the unit to the menu protect mode, the opening of the setup menus can be disabled even if the front panel's LOCAL/MENU/REMOTE switch is set to the MENU position.

1 Set the LOCAL/MENU/REMOTE switch to the MENU position.
The unit is now set to the menu setting mode, and the menu screen appears on the video monitor.

2 Press the RESET button.
The unit is set to the default setting mode, and the default setting screen appears on the video monitor.

```
SELECT        MODE
       *      ESCAPE
              LOAD
              SAVE
              PROTECT
```

3 Press the MENU-UP button or MENU-DOWN button to position the cursor at PROTECT, and press the SET button.
The unit is now set to the menu protect mode, and the screen to confirm whether menu protect is to be initiated or canceled now appears on the video monitor.

```
MENU PROTECT OK?
        * NO
          YES
```

4 Press the MENU-UP button or MENU-DOWN button to move the cursor to the YES position, and press the SET button.
The menu screen now appears.

5 Set the LOCAL/MENU/REMOTE switch to the LOCAL or REMOTE position. The unit is now set to the menu protect mode.
When the LOCAL/MENU/REMOTE switch is set to the MENU position, "MENU PROTECTED" appears on the video monitor screen instead of the menu setting mode being established.

<Note>
If, while the menu protect menu is set, the LOCAL/MENU/REMOTE switch is set to the menu position while the front panel's COUNTER button is held down, the menu setting mode will be established, and regular menu settings can be performed.
Perform steps *2* through *7* in "How to perform the settings using the on-screen menus."
(See page 23)

How to release the menu protect mode

1 Set the LOCAL/MENU/REMOTE switch to the MENU position while holding down the front panel's COUNTER button.
The unit is now set to the menu setting mode, and the menu screen appears on the video monitor.

2 Perform steps *2* and *3* of "How to initiate the menu protect mode" described above.
The screen to confirm whether menu protect is to be initiated or canceled now appears on the video monitor.

```
MENU PROTECT OK?
     * NO
       YES
```

3 Press the MENU-UP button or MENU-DOWN button to move the cursor to the NO position, and press the SET button.
The menu protect mode is now released.

How to display the DIAG menu

This unit incorporates a function for displaying the HOURS METER and software program version on the video monitor.

1 Set the LOCAL/MENU/REMOTE switch to the MENU position while holding down the EJECT button.
The unit is now set to the DIAG display mode, and the HOURS METER appears on the video monitor.

```
DIAG-MENU    HOURS METER
H0   OPERATION   00000H
H1   DRUM RUN    00000H
H2   TAPE RUN    00000H
H3   THREADING   00000T
```

2 With the HOURS METER displayed, press the MENU-UP button or MENU-DOWN button while holding down the MODE button.
The software program version is displayed on the video monitor.
The front microcomputer version appears on the front panel's counter display.

```
DIAG-MENU    VERSION
<NTSC>
IF          1.**-**-*.**
AV-SYSCON   1.**-**-*.**
SBC         1.**-**-*.**
CYLINDER    1.**-**-*.**
REEL        1.**-**-*.**
END
```

When the MENU-UP button or MENU-DOWN button is pressed again while holding down the MODE button, the HOURS METER display is restored.

3 Set the LOCAL/MENU/REMOTE switch to the LOCAL or REMOTE position.
The normal mode is now restored.

SYSTEM menu

Item		Setting		Description of setting
No.	Superimposed display	No.	Superimposed display	
00	SYSTEM H	0000 : 0255	−128 : 127	For adjusting the horizontal phase. This item enables the phase to be varied by up to ±1.5 μ.
01	SC COARSE	0000 0001 0002 0003	0 90 180 270	For coarsely adjusting the subcarrier phase. This item enables the phase to be varied by selecting one of 4 positions at 90-degree increments.
02	SC FINE	0000 : 0255	−128 : 127	For finely adjusting the subcarrier phase. This item enables the phase to be varied by up to 90 degrees. By using this item in tandem with SC COARSE, any setting up to 360 degrees can be achieved.
03	SCH COARSE	0000 0001 0002 0003	0 90 180 270	For coarsely adjusting the SCH (Sub Carrier to Horizontal) phase. This item enables the phase to be varied by selecting one of 4 positions at 90-degree increments.
04	SCH FINE	0000 : 0255	−128 : 127	For finely adjusting the SCH (Sub Carrier to Horizontal) phase. This item enables the phase to be varied by up to 90 degrees. By using this item in tandem with SCH COARSE, any setting up to 360 degrees can be achieved.
05	VIDEO LEVEL	0000 0128 : 0255	−128 0 : 127	For setting the video level. This item enables the video level to be varied by up to ±3 dB.
06	SET UP LEVEL	0000 0128 0255	−128 0 127	For setting the setup amount. This item enables the setup amount to be varied by up to 10 IRE.
07	HUE	0000 0128 : 0255	−128 0 : 127	For setting the hue. This item enables the hue to be varied by up to ±25 degrees.
08	CHROMA LEVEL	0000 0128 : 0255	−128 0 : 127	For setting the chroma level. This item enables the chroma level to be varied by up to ±3 dB.

The underlining denotes the factory mode setting.

<Notes>
● Item numbers 05, 06, 07 and 08 are initialized only when ALL has been selected by the initialization operation.
● The ░░░░░░ setting items are not initialized by the regular menu reset operation.
  The unit is shipped with the settings already adjusted.

BASIC menu

Item		Setting		Description of setting
No.	Superimposed display	No.	Superimposed display	
000	SUPER			For setting whether to show the superimposed display from the MONITOR OUT connector.
		0000	OFF	0: The superimposed display is not shown.
		0001	ON	1: The superimposed displayed is shown.
001	DISPLAY SEL			For setting what is to be shown by the superimposed display from the MONITOR OUT connector.
		0000	TIME	0: Only the time is displayed.
		0001	T&STA	1: The time and operation mode are displayed.
		0002	T&R	2: The time and remaining tape amount are displayed.
		0003	T&S&R	3: The time, operation mode and remaining tape amount are displayed.
002	CHARA H-POS	0000	0	For setting the horizontal position of the superimposed characters.
		0001	1	(10 steps)
		0003	4	
		0007	9	
003	CHARA V-POS	0000	0	For setting the vertical position of the superimposed characters.
		0001	1	(23 steps)
		0003	3	
		0007	22	
004	CHARA TYPE			For selecting the type of characters for the superimposed and menu displays.
		0000	WHITE	0: White characters on a black background
		0001	W/OUT	1: White characters with black outlines

The underlining denotes the factory mode setting.

<Note>
If the DATA+ button or DATA− button is pressed with the MODE button held down when the CHARA H-POS and CHARA V-POS items are being set, the counter display appears temporarily, and the positions can be set while the actual status is monitored.

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OPERATION menu

Item		Setting		Description of setting
No.	Superimposed display	No.	Superimposed display	
100	LOCAL ENABLE			For selecting the switches which can be operated on the front panel in the REMOTE mode.
		0000	DIS	0: None of the switches can be operated.
		0001	ST&EJ	1: Only the STOP switch and EJECT switch can be operated.
101	TAPE TIMER			For selecting the CTL counter display.
		0000	12H	0: ±12-hour display
		0001	24H	1: 24-hour display
102	S/F/R EE SEL			For selecting the EE or VV output in the STOP, FF or REW mode.
		0000	EE	0: E-E (electric modulation to electric playback) is output.
		0001	TAPE	1: V-V (VTR to VTR recording) is output.
103	WIDE MODE			For selecting the WIDE mode.
		0000	AUTO	0: The mode is detected automatically.
		0001	WIDE	1: The mode is forcibly treated as WIDE.
		0002	NORMAL	2: The mode is forcibly treated as NORMAL.
104	TAPE IN MOD			For selecting the operation which is to be performed when the cassette has been inserted into the unit.
		0000	STOP	0: STOP
		0001	REW	1: REWIND
		0002	PAUSE	2: PLAY PAUSE
		0003	PLAY	3: PLAY
105	TAPE END MOD			For selecting the operation which is to be performed when the tape has arrived at the end.
		0000	STOP	0: STOP
		0001	REW	1: REWIND
		0002	REW→EJ	2: The tape is rewound and, upon completion of rewinding, it is ejected.
		0003	EJECT	3: EJECT
106	AUTO BACK			For selecting whether the tape is to be automatically rolled back in order to ensure frame to frame continuity.
		0000	OFF	0: The tape is not automatically rolled back.
		0001	ON	1: The tape is automatically rolled back.
107	FORMAT SEL			For selecting the format when an L cassette is to be used.
		0000	DVCPRO	0: DVCPRO mode
		0001	DV	1: DV mode
		0002	DVCAM	2: DVCAM mode
108	REC INHIBIT			For selecting whether to inhibit recording on the unit.
		0000	OFF	0: Recording is allowed.
		0001	ON	1: Recording is inhibited.
109	CAP. LOCK			For selecting the capstan lock mode.
		0000	2F	0: The 2F lock mode is selected for the capstan.
		0001	4F	1: The 4F lock mode is selected for the capstan.
110	FF. REW MAX			For setting the maximum FF and REW speed.
		0000	X32	0: 32 times normal tape speed
		0001	X60	1: 60 times normal tape speed
111	MEMORY MODE			For setting the memory operation.
		0000	OFF	0: The memory operation is not performed.
		0001	M-STOP	1: The tape is stopped during FF or REW near the BEGIN point.
		0002	REPT1	2: When the tape arrives at the end, it is rewound to the BEGIN point where it stops.
		0003	CONT	3: When the tape arrives at the end, it is rewound to the BEGIN point and played. This sequence is repeated.
112	BGN PRESET			For setting the BEGIN point.
113	END PRESET			For setting the END point.

The underlining denotes the factory mode setting.

INTERFACE menu

Item		Setting		Description of setting
No.	Superimposed display	No.	Superimposed display	
200	BAUD RATE	0000	1200	For setting the RS-232C transmission speed (baud rate).
		0001	2400	
		0002	4800	
		0003	9600	
		0004	19200	
201	DATA LENGTH	0000	8BIT	For setting the RS-232C data length.
		0001	7BIT	
202	STOP BIT	0000	1BIT	For setting the RS-232C stop bit.
		0001	2BIT	
203	PARITY			For setting none, odd or even as the RS-232C parity bit.
		0000	NONE	0: The parity bit is not used.
		0001	ODD	1: Odd parity is used for the parity bit.
		0002	EVEN	2: Even parity is used for the parity bit.
204	ACK RETURN			For setting the RS-232C return data.
		0000	OFF	0: The ACK code is not returned.
		0001	ON	1: The ACK code is returned.
205	232C ID SEL			For setting the RS-232C device ID.
		0000	D250	0: The ID of the AJ-D250 is returned. Use this setting when exercising control using the AJ-A250 or a computer.
		0001	D230	1: The ID of the AJ-D230 is returned. Use this setting when exercising control using the AJ-A571. When the AJ-A571 is used for control, the unit can be used as a player VTR.

The underlining denotes the factory mode setting.

TAPE PROTECT menu

Item		Setting		Description of setting
No.	Superimposed display	No.	Superimposed display	
400	STILL TIMER	0000	0.5s	For selecting the time taken for the tape protection mode to be established when the unit has been left standing in the STOP, PLAY, PAUSE or STILL mode.
		0001	5s	
		0002	10s	
		0003	30s	(Units = s: seconds, min: minutes)
		0004	1min	• When the unit has been left standing in the REC PAUSE mode, the time
		0005	2min	taken for the tape protection mode to be established is fixed at 2 minutes.
401	SRC PROTECT			For setting the tape protection operation when the unit has been left standing in the PAUSE mode.
		0000	STEP	0: Step (step FWD in STILL or PAUSE mode; step REV in REC PAUSE mode)
		0001	HALF	1: Half loading (STANDBY OFF)
402	DRUM STDBY			For setting the mode in which the drum is to be stopped during STANDBY OFF.
		0000	OFF	0: The drum is stopped during STANDBY OFF.
		0001	ON	1: The drum rotates at all times.
403	STOP PROTECT			For setting the tape protection operation when the unit is left standing in the STOP mode.
		0000	STEP	0: Step
		0001	HALF	1: Half loading

The underlining denotes the factory mode setting.

<Note>
When a consumer-use DV format tape is used, the tape protection mode will be established in 10 seconds even if 30s, 1min or 2min is selected as the STILL TIMER item setting.

Setup Menus

TIME CODE menu

Item		Setting		Description of setting
No.	Superimposed display	No.	Superimposed display	
500	VITC POS-1	0000	10L	For setting the position where the VITC signal is to be inserted.
		0001	11L	(The same line as the one set for the VITC POS-2 item cannot be selected.)
		0006	16L	
		0010	20L	
501	VITC POS-2	0000	10L	For setting the position where the VITC signal is to be inserted.
		0001	11L	(The same line as the one set for the VITC POS-1 item cannot be selected.)
		0008	18L	
		0010	20L	
502	VITC BLANK	0000	BLANK	For setting whether the VITC signal is to be output. 0: The VITC signal is not output.
		0001	THRU	1: The VITC signal is output.
503	TCG REGEN			For selecting the signal to be regenerated when the time code generator (TCG) is in the regeneration mode (item No.506).
		0000	TC&UB	0: Both TC and UB are regenerated.
		0001	TC	1: Only TC is regenerated.
		0002	UB	2: Only UB is regenerated.
504	BINARY GP			For setting the status for using the user's bit of the TCG.
		0000	000	0: Not specified (a character set is not used).
		0001	001	1: ISO characters (8-bit character set complying with ISO646, ISO2022)
		0002	010	2: Unassigned 1 (undefined)
		0003	011	3: Unassigned 2 (undefined)
		0004	100	4: Unassigned 3 (undefined)
		0005	101	5: Page/line (page/line multiplex system complying with SMPTE262M)
		0006	110	6: Unassigned 4 (undefined)
		0007	111	7: Unassigned 5 (undefined)
505	DF MODE			For setting drop frame or non-drop frame for the CTL and TCG.
		0000	DF	0: The drop frame mode is established for operation.
		0001	NDF	1: The non-drop frame mode is established for operation.
506	TC MODE			For setting the TCG mode.
		0000	P-REC	1: PRESET of the internal TC is used in the REC RUN mode.
		0001	P-FREE	0: PRESET of the internal TC is used in the FREE RUN mode.
		0002	I-REG	2: The internal TC is used in the regeneration mode.
		0003	E-VITC	3: The input video signal VITC is used in the regeneration mode.
507	TC PRESET			For setting the TCG value.
508	UB PRESET			For setting the user's bit value.
509	TCG CF FLAG			For setting the CF flag of the TCG to ON or OFF.
		0000	OFF	0: The CF flag is set to OFF.
		0001	ON	1: The CF flag is set to ON.

The underlining denotes the factory mode setting.

Setup Menus

VIDEO menu

Item		Setting		Description of setting
No.	Superimposed display	No.	Superimposed display	
600	VIDEO MODE			For setting the recording and playback of the video signals.
		0000	B/W	0: When monochrome signals are used
		0001	COLOR	1: When color signals are used
				● Set this item to the B/W mode when monochrome signals are to be recorded or played back.
				Set the item to the COLOR mode with regular color signals.
				● If color signals are recorded in the B/W mode, the pictures will be abnormally colored when the signals are played back.
601	V-MUTE SEL			For selecting the processing to be performed in the event that LOW-RF has occurred or the servo lock has been disengaged during playback.
		0000	N-MUTE	0: The video signals are not muted.
		0001	LOW-RF	1: The video signals are muted.
602	CC (F1) BLANK			For selecting ON or OFF for the closed capture signals in the first field.
		0000	BLANK	0: Forcible blanking
		0001	THRU	1: No blanking
603	CC (F2) BLANK			For selecting ON or OFF for the closed capture signals in the second field.
		0000	BLANK	0: Forcible blanking
		0001	THRU	1: No blanking
604	FREEZE SEL			For selecting the freeze mode of the still pictures in the PLAY PAUSE or frame advance mode.
		0000	FIELD	0: Field freeze
		0001	FRAME	1: Frame freeze
605	IN FRM DET			For selecting the process for detecting the input signal frames.
		0000	FORCED	0: The frames are detected at all times.
		0001	AUTO	1: Frame detection is inhibited only with non-standard signals.
606	STD/NSTD SEL			For selecting the video signal processing.
		0000	AUTO	0: The mode corresponding to the input is automatically established.
		0001	NSTD	1: The non-standard mode is forcibly established.
607	VIN SETUP			For selecting the setup level when input composite signals are to be converted into component signals and recorded.
		0000	THRU	0: The input signals are recorded as they are.
		0001	CUT	1: The signals are recorded after removing the 7.5% setup.

The underlining denotes the factory mode setting.

Setup Menus

AUDIO menu

Item		Setting		Description of setting
No.	Superimposed display	No.	Superimposed display	
700	AUDIO EDIT IN	0000	CUT	For selecting the joining method at the IN point during digital audio editing. 0: Cutting
		0001	FADE	1: Fading
701	AUDIO EDIT OUT	0000	CUT	For selecting the joining method at the OUT point during digital audio editing. 0: Cutting
		0001	FADE	1: Fading
702	PB FADE	0000	AUTO	For selecting the processing to be performed for the audio edit points (IN point, OUT point, frame continuity point) during playback. 0: The same status as for recording is established.
		0001	CUT	1: Forcible cutting
		0002	FADE	2: Forcible fading
703	SEARCH CUE	0000	OFF	For selecting whether to output the CUE AUDIO signal during searches and FF or REW (VV). 0: The signal is not output.
		0001	ON	1: The signal is output.
704	DV PB ATT	0000	OFF	For selecting the audio output level during DV format playback. 0: Normal playback level
		0001	ON	1: The output level is controlled only during DV format playback.
705	CUE INSERT	0000	OFF	For selecting whether to record the CH1/CH2 mixed signal for audio input in CUE AUDIO when editing the audio insert. 0: The mixed signal is not recorded as the CUE AUDIO signal.
		0001	ON	1: The mixed signal is recorded as the CUE AUDIO signal.

The underlining denotes the factory mode setting.

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Editing

Editing with the RS-232C remote control

Using the RS-232C remote control (AJ-A250), which is available as an optional accessory, two units—a player VTR and a recorder VTR—can be controlled directly from the controller to enable speedier and more efficient assemble editing, insert editing and other editing jobs.

Preparation:
• As shown in the figure below, connect the player VTR and recorder VTR to the RS-232C remote control.
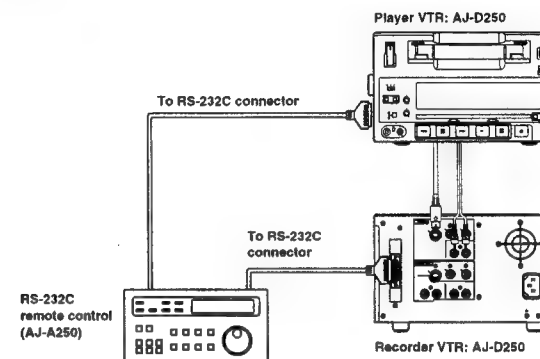
• Set the INPUT SELECT switch to the position which corresponds to the connection with the player VTR.
  S-VIDEO: When connected to the S-VIDEO IN and AUDIO IN connectors
  LINE: When connected to the VIDEO IN and AUDIO IN connectors
• Set the LOCAL/MENU/REMOTE switch to the REMOTE position.

<Note>
The disturbances in the pictures during preview can be alleviated by inputting a black burst signal or other reference signal to the REF VIDEO input connectors of the player VTR and recorder VTR.

Operation:
Use the RS-232C remote control to control both the player VTR and recorder VTR.

Read the operating instructions of the AJ-A250 carefully.

<Note>
When the AG-A571 is to be used as the remote control, select D230 as the setup menu item No.205 "232C ID SEL" setting. (See page 30)
The unit can be used as the player VTR.

Audio editing functions

The information (setup menu item No. 700, 701) concerning the selection of the joining method used at the edit points is recorded during digital audio editing, and this information is detected during playback so that the edit points can be processed automatically.
This applies only when AUTO has been selected as the playback fade selection (setup menu item No.702) setting.

Cutting

When **CUT** has been selected as the joining method at the edit points.
(setup menu item No.700, 701)

Noise may appear here at the joins in the edit points.
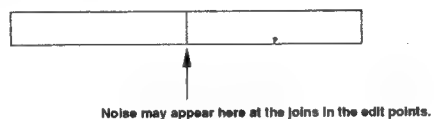
V-fading

When **FADE** has been selected as the joining method at the edit points
(setup menu item No.700, 701)

V-fading is performed instantaneously to suppress the noise.
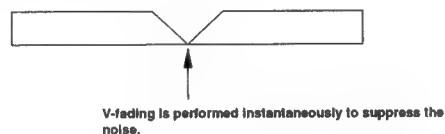
<Notes>
● When CUT has been selected for the playback fade selection (setup menu item No.702), cutting will be performed for all the joins at the edit points.
● When FADE has been selected for the playback fade selection (setup menu item No.702), V-fading is performed for all the joins at the edit points.
● When only one channel has been selected for the sound to be inserted during insert editing, the sound of the channel which has not been selected will be muted.

First Edit Function (Preparing the editing tape)

The CTL (control) signal must be recorded ahead of time onto the editing tape. The method used to record it differs depending on whether assemble editing or insert editing is to be performed.

First edit for assemble editing

In the case of a tape for assemble editing, the CTL signal is recorded at the beginning of where the recording is to be commenced.

Position where CTL signal recording starts

3 sec.

Direction of tape travel

CTL signal recording

−23 sec. position   0 sec. position
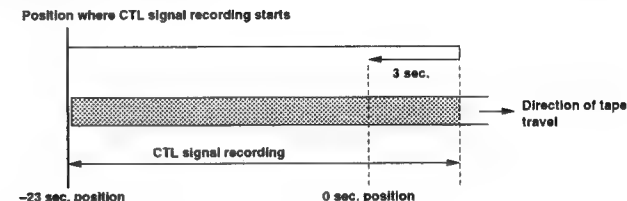
First edit for insert editing

In the case of a tape for insert editing, the CTL signal is recorded from the beginning of where the recording is to be commenced to the end.

The "E-00" servo lock error appears on the tape counter when insert editing is performed for a tape on which the CTL signal has not been recorded.
When insert editing is performed, the CTL signal must be recorded ahead of time.

<Note>
When first edit is to be performed, operation can be conducted by connecting the RS-232C remote control (AJ-A250), which is available as an optional accessory. However, control using the RS-232C interface (EFE command) can also be exercised from a computer.
(See page 50)

RS-232C

The following functions can be controlled using the RS-232C interface.

■ **Basic operations**

EJECT	INSERT
STOP	SEARCH PAUSE
PLAY	SEARCH SPEED UP
REC/PLAY	SEARCH SPEED DOWN
FF	FORWARD/ADVANCE
REW	REVERSE/ADVANCE
PAUSE	REVERSE/PLAY
COUNTER RESET	DIRECT SEARCH

■ **Status checks**
The current VTR mode can be checked.

■ **Simple editing functions**
Video/audio, audio/video and various other insert editing operations can be performed.

■ **Search function**
Specific frame positions can be searched.

1. Hardware specifications

(1) Interface specifications

Connector:
D-SUB 25 pins
DCE specifications (straight cable supported)

Pin No.	Signal	Description
1	FG	Frame GND
2	SD (TXD)	Transmitted Data
3	RD (RXD)	Received Data
4	RS (RTS)	Request to Send
5	CD (CTS)	Clear to Send
6	DR (DSR)	Data Set Ready
7	SG	Signal GND
20	ER (DTR)	Data Terminal Ready

Example of connections

Computer end			VTR end	
Frame	FG		1	FG
3	SD (TXD)		2	SD (TXD)
2	RD (RXD)		3	RD (RXD)
7	RS (RTS)		4	RS (RTS)
8	CD (CTS)		5	CD (CTS)
6	DR (DSR)		6	DR (DSR)
5	SG		7	SG
4	ER (DTR)		20	ER (DTR)
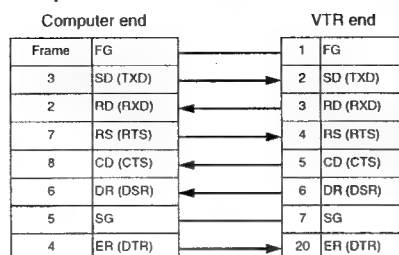
(2) Communication parameters

The unit's communication parameters are as listed below. If any of the parameters are to be changed, select the items on the menu concerned, and make the changes.

Baud Rate: 9600 bps
Bit Length: 8 bit
Stop Bit: 1 bit
Parity: NONE

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2. Software specifications

(1) External interface specifications

Communication system	Asynchronous system, full duplex
Baud rate	1200, 2400, 4800, 9600 or 19200 bps
Bit length	8 bits or 7 bits
Stop bit	1 bit or 2 bits
Parity	None, odd or even

<Notes>
● The factory settings are 9600 bps, 8 bits, 1 stop bit and none as the parity.
● The unit has a 127-byte receive buffer.

(2) Sending format (computer → VTR)

■ **Data format**

[STX]	[discrimination]	[:]	[data]	[ETX]
02H	XX XX XX	3AH	XX····XX	03H

20H<XX<7FH   (XX= HEX character code)

● discrimination : Command identifier (3 bytes)
● : : Code representing a delimiter between the command and data.
● data : The data code is added as required.

1. All send commands must start with STX (character code 02H).
   Next comes the discrimination, which identifies the command.
   If required, the data is added following the colon.
   At the very end comes ETX (character code 03H).
2. When STX is re-sent before ETX is sent, the receive buffer inside the VTR is cleared (all the data received so far will be destroyed), and the data is processed anew with the STX which was received again at the head.

(3) Receiving format (VTR → computer)

The VTR responds to a send command with the format data below.

1. First, the VTR returns the data indicating whether the command from the computer was received properly.

1) If the communication was error-free, the VTR returns the ACK (Acknowledge) data.

[ACK]
06H

2) If there was a problem in communication, the VTR returns the data starting with NAK (Negative Acknowledge).
If the VTR was in the process of sending the data when the computer sent its command, the VTR returns NAK after it completes the sending of the data.
The VTR now destroys all the received data with errors.

[NAK] □
15H (XX)

● Contents of □
1 (31H): Parity Error
3 (33H): Framing Error
4 (34H): Over Run Error

2. Next, after ACK is returned when the communication was error-free, the data is returned in the following format by the operation of the VTR.

1) The format of the response (return) data in cases where commands from the computer were properly received by the VTR is as follows.

[STX] [data] [ETX]
02H XX····XX 03H

example:
Send command　　Return data = Receive data
[STX] QOP [ETX] → [ACK] [STX] OEJ [ETX]
[STX] QCD [ETX] → [ACK] [STX] CD □□□□□□□□□□ [ETX]

2) If there were errors in the data or any problems in the VTR, a description of the reason why the data was not received is returned in the following format.

[STX]　E　R　0　0　□　[ETX]
02H　45H　52H　30H　30H　XX　03H

● Contents of □
1 (31H): A command which is not supported or a command execution error
2 (32H): Erroneous parameter with the wrong data code
3 (33H): Receive buffer overflow error

[STX]　E　R　1　0　□　[ETX]
02H　45H　52H　31H　30H　XX　03H

● Contents of □
2 (32H): Front loading error
3 (33H): Loading error
4 (34H): Drum capstan system error
5 (35H): Reel system error
6 (36H): Tension system error
7 (37H): Fan motor error
8 (38H): Dew error

[STX]　E　R　1　2　□　[ETX]
02H　45H　52H　31H　32H　XX　03H

● Contents of □
0 (30H): Search error (start/end)
1 (31H): Search error (search aborted by front panel operation)
2 (32H): Search error (no target position)
3 (33H): Search error (search aborted by command)

[STX]　E　R　1　F　F　[ETX]
02H　45H　52H　31H　46H　46H　03H
System (servo communication) error

(4) Command list

■ List of commands

The table below lists the send commands and operations for each mode as seen from the computer end.
[STX] = HEX code 02H
[ETX] = HEX code 03H
: = HEX code 3AH
The discrimination part and data part represent the ASCII codes which support the corresponding symbols.

● Audio control commands

Sends data of computer	Return data from VTR	Description of command
[STX] AOC:m [ETX]	[STX] AOC [ETX]	Sets the audio signal output channel.

● Counter control commands

Sends data of computer	Return data from VTR	Description of command
[STX] CCP:data [ETX]	[STX] CCP [ETX]	Presets the CTL counter data (same as CLP).
[STX] CDF [ETX]	[STX] CDF [ETX]	Cancels the drop frame mode setting.
[STX] CDN [ETX]	[STX] CDN [ETX]	Makes the drop frame mode setting valid.
[STX] CHM:m [ETX]	[STX] CHM [ETX]	Sets 12-/24-hour mode for the CTL display.
[STX] CLP:data [ETX]	[STX] CLP [ETX]	Presets the CTL counter data (same as CCP).
[STX] CRN:m [ETX]	[STX] CRN [ETX]	Sets the signal to be regenerated when TCG is in regeneration mode.
[STX] CRR [ETX]	[STX] CRR [ETX]	Uses the TCG in the REC RUN mode.
[STX] CRT [ETX]	[STX] CRT [ETX]	Resets the CTL counter data.
[STX] CTC [ETX]	[STX] CTC [ETX]	Sets the mode in which time code data is to be used for the counter value.
[STX] CTF [ETX]	[STX] CTF [ETX]	Uses the TCG in the FREE RUN mode.
[STX] CTL [ETX]	[STX] CTL [ETX]	Sets the mode in which CTL data is to be used for the counter value.
[STX] CTM:m [ETX]	[STX] CTM [ETX]	Sets the TCG operation mode.
[STX] CTP [ETX]	[STX] CTP [ETX]	Uses the TCG in the preset mode.
[STX] CTR [ETX]	[STX] CTR [ETX]	Uses the TCG in the regeneration mode.
[STX] CTS:data [ETX]	[STX] CTS [ETX]	Presets the TCG data.
[STX] CUS:data [ETX]	[STX] CUS [ETX]	Presets the user's bit data.
[STX] CVP:data [ETX]	[STX] CVP [ETX]	Specifies the line where the external VITC is to be inserted.

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● Display control commands

Sends data of computer	Return data from VTR	Description of command
[STX] DFC:m [ETX]	[STX] DFC [ETX]	Sets the display mode of the display counter.

● Edit control commands

Sends data of computer	Return data from VTR	Description of command
[STX] EAB:m [ETX]	[STX] EAB [ETX]	Sets the auto back recording.
[STX] EAD:m [ETX]	[STX] EAD [ETX]	AUDIO INSERT PAUSE
[STX] EIN [ETX]	[STX] EIN [ETX]	VIDEO INSERT PAUSE
[STX] EFE:data [ETX]	[STX] EFE [ETX]	FIRST EDIT

● Media operation control commands

Sends data of computer	Return data from VTR	Description of command
[STX] HRE:m [ETX]	[STX] HRE [ETX]	Sets the VTR's operation mode at the tape end (when recording).
[STX] HTE:m [ETX]	[STX] HTE [ETX]	Sets the VTR's operation mode at the tape end (at all times other than recording).
[STX] HTI:m [ETX]	[STX] HTI [ETX]	Sets the VTR's operation mode when the tape is inserted.

● Input/output control commands

Sends data of computer	Return data from VTR	Description of command
[STX] IEV:data [ETX]	[STX] IEV [ETX]	Switches between E-E and V-V output. E-E: Electric modulation to electric playback V-V: VTR to VTR recording

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● Operation control commands

Sends data of computer	Return data from VTR	Description of command
[STX] OAF [ETX]	[STX] OAF [ETX]	Advances frames in the forward direction.
[STX] OAR [ETX]	[STX] OAR [ETX]	Advances frames in the reverse direction.
[STX] OBF [ETX]	[STX] OBF [ETX]	STANDBY OFF
[STX] OBN [ETX]	[STX] OBN [ETX]	STANDBY ON
[STX] OEJ [ETX]	[STX] OEJ [ETX]	EJECT
[STX] OFF [ETX]	[STX] OFF [ETX]	FAST FORWARD
[STX] OPA [ETX]	[STX] OPA [ETX]	PAUSE
[STX] OPL [ETX]	[STX] OPL [ETX]	PLAY
[STX] OPR [ETX]	[STX] OPR [ETX]	REVERSE PLAY
[STX] OPT:data [ETX]	[STX] OPT [ETX]	Plays the tape back to the designated position (same as SPT).
[STX] ORC [ETX]	[STX] ORC [ETX]	RECORD
[STX] ORP [ETX]	[STX] ORP [ETX]	RECORD PAUSE
[STX] ORW [ETX]	[STX] ORW [ETX]	REWIND
[STX] OSD [ETX]	[STX] OSD [ETX]	SHUTTLE SPEED DOWN
[STX] OSF:n [ETX]	[STX] OSF [ETX]	SHUTTLE FORWARD
[STX] OSL [ETX]	[STX] OSL [ETX]	Starts slow playback.
[STX] OSP [ETX]	[STX] OSP [ETX]	STOP
[STX] OSR:n [ETX]	[STX] OSR [ETX]	SHUTTLE REVERSE
[STX] OSU [ETX]	[STX] OSU [ETX]	SHUTTLE SPEED UP
[STX] OTE:m [ETX]	[STX] OTE [ETX]	Selects E-E output and V-V output.

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● Query control commands

Sends data of computer	Return data from VTR	Description of command
[STX] QAL [ETX]	[STX] ALV0 [ETX]	Queries the address level.
[STX] QAO [ETX]	[STX] AOm [ETX]	Queries the audio output channels.
[STX] QCA [ETX]	[STX] CUPdata [ETX]	Queries the user's bit data which was preset in the TCG.
[STX] QCB [ETX]	[STX] CUSdata [ETX]	Queries the user's bit data of the TCG.
[STX] QCC [ETX]	[STX] CCPdata [ETX]	Queries the counter data (same as QCD).
[STX] QCD [ETX]	[STX] CDdata [ETX]	Queries the counter data (same as QCC).
[STX] QCE [ETX]	[STX] CTEdata [ETX]	Queries the TCG preset data.
[STX] QCF [ETX]	[STX] CDm [ETX]	Queries the drop frame mode.
[STX] QCM [ETX]	[STX] CHMm [ETX]	Queries the 12-/24-hour mode for the CTL display.
[STX] QCP [ETX]	[STX] CVPdata [ETX]	Queries the line where the VITC signal is to be inserted.
[STX] QCR [ETX]	[STX] CRNm [ETX]	Queries the signal to be regenerated when the TCG is in the regeneration mode.
[STX] QCS [ETX]	[STX] CTSdata [ETX]	Queries the TCG data.
[STX] QCT [ETX]	[STX] CTdata [ETX]	Queries the TCG mode.
[STX] QCU [ETX]	[STX] CURdata [ETX]	Queries the user's bit data of the TCR.
[STX] QCW [ETX]	[STX] CTMm [ETX]	Queries the TCG mode.
[STX] QCZ [ETX]	[STX] CTZm [ETX]	Queries the TCR read status.
[STX] QDF [ETX]	[STX] DFCm [ETX]	Queries the display mode of the counter display.
[STX] QEB [ETX]	[STX] EABm [ETX]	Queries the auto back recording.
[STX] QHC [ETX]	[STX] HCMdata [ETX]	Queries the cassette tape information.
[STX] QHE [ETX]	[STX] HTEm [ETX]	Sets the VTR's operation mode at the tape end (at all times other than recording).
[STX] QHI [ETX]	[STX] HTIm [ETX]	Queries the tape insertion mode.
[STX] QHR [ETX]	[STX] HTRdata [ETX]	Queries the remaining tape amount.
[STX] QHT [ETX]	[STX] HREm [ETX]	Sets the VTR's operation mode at the tape end (when recording).
[STX] QIC [ETX]	[STX] 1 [ETX]	Queries the product area classification code.
[STX] QID [ETX]	[STX] data [ETX]	Queries the equipment's ID code.
[STX] QIE [ETX]	[STX] IEVdata [ETX]	Queries the E-E output and V-V output.

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● Query control commands

Sends data of computer	Return data from VTR	Description of command
[STX] QLH:m [ETX]	[STX] LHRdata [ETX]	Queries the hours meter.
[STX] QOT [ETX]	[STX] OTEm [ETX]	Queries the E-E output and V-V output.
[STX] QOP [ETX]	[STX] data [ETX]	Queries the VTR's operation mode.
[STX] QOD:d1d2 [ETX]	[STX] OASdata [ETX]	Queries the operation modes.
[STX] QOS [ETX]	[STX] OPSdata [ETX]	Queries the operation modes.
[STX] QRA [ETX]	[STX] RAm [ETX]	Queries the ACK (Acknowledge) code response setting.
[STX] QRS [ETX]	[STX] RSEm [ETX]	Queries the search end mode.
[STX] QRV:m [ETX]	[STX] VERdata [ETX]	Queries the software program version.
[STX] QSM [ETX]	[STX] SMMm [ETX]	Queries the memory mode.
[STX] QSY [ETX]	[STX] SMILPdata [ETX]	Queries the memory in data.
[STX] QSP:m [ETX]	[STX] SMPdata [ETX]	Queries the repeat position.
[STX] QTT [ETX]	[STX] TSTdata [ETX]	Queries the standby off timer setting.
[STX] QVI [ETX]	[STX] VIm [ETX]	Queries the INPUT SELECT switch position.
[STX] QVM [ETX]	[STX] VMDm [ETX]	Queries the video mode setting.

● Communication control commands

Sends data of computer	Return data from VTR	Description of command
[STX] RAN [ETX]	[STX] RAN [ETX]	Makes the ACK (Acknowledge) code return function valid.
[STX] RAF [ETX]	[STX] RAF [ETX]	Cancels the ACK (Acknowledge) code return function.
[STX] RCK [ETX]	[STX] RCK [ETX]	Checks the communication line.
[STX] RSE:m [ETX]	[STX] RSE [ETX]	Sets the search end mode.

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● Searches control commands

Sends data of computer	Return data from VTR	Description of command
[STX] SCP:data [ETX]	[STX] SCP [ETX]	Searches the counter value and play.
[STX] SCS:data [ETX]	[STX] SCS [ETX]	Searches the counter value and sets to still picture (same as SRS).
[STX] SMI:data [ETX]	[STX] SMI [ETX]	Sets the memory search data.
[STX] SMM:m [ETX]	[STX] SMM [ETX]	Sets the memory mode.
[STX] SMP:data [ETX]	[STX] SMP [ETX]	Specifies the repeat position.
[STX] SMS [ETX]	[STX] SMS [ETX]	Searches the memory data.
[STX] SPT:data [ETX]	[STX] SPT [ETX]	Plays the tape back to the designated position (same as OPT).
[STX] SRS:data [ETX]	[STX] SRS [ETX]	Searches the counter value and sets to still picture (same as SCS).
[STX] SUB:data [ETX]	[STX] SUB [ETX]	Searches the user's bit.

● Timer control commands

Sends data of computer	Return data from VTR	Description of command
[STX] TST:data [ETX]	[STX] TST [ETX]	Sets the standby off timer.

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■ Audio control commands

Sends data of computer	Return data from VTR	Description of command
[STX] AOC:m [ETX] Parameters m = 1: CH1 2: CH2 3: CH3 4: CH4 5: CH1 & CH2 6: CH3 & CH4 7: CH1+3 & CH2+4	[STX] AOC [ETX]	Sets the audio signal output channel/s. Playback output is possible for CH3 and CH4 when audio signals for 4 channels have been recorded on a DV format tape. <Note> This command is ignored while a search control command is being processed.

■ Counter control commands

Sends data of computer	Return data from VTR	Description of command
[STX] CCP:data [ETX] Parameters data = ghmmssff g = Blank: With a positive value – sign: With a negative value h = 0~9: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	[STX] CCP [ETX]	Presets the designated counter value on the CTL counter. The value will be corrected as follows if the non-drop frame preset value has been set while the drop frame mode is established. 00:01:00:00 → 00:00:59:28 00:01:00:01 → 00:00:59:29 <Note> This command is ignored while a search control command is being processed or while the tape is being ejected.
[STX] CDF [ETX]	[STX] CDF [ETX]	Disables the drop frame mode setting. CTL and the time code are set to the non-drop frame mode. The non-drop frame is enabled for the time code when it is being recorded. <Note> This command is ignored while a search control command is being processed, during recording and in the INSERT mode.
[STX] CDN [ETX]	[STX] CDN [ETX]	Enables the drop frame mode setting. CTL and the time code are set to the drop frame mode. The drop frame is enabled for the time code when it is being recorded. <Note> This command is ignored while a search control command is being processed, during recording and in the INSERT mode.
[STX] CHM:m [ETX] Parameters m = 1: 12-hour mode 2: 24-hour mode	[STX] CHM [ETX]	Sets the CTL display to the 12-hour mode or 24-hour mode. <Note> This command is ignored while a search control command is being processed.

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■ Counter control commands

Sends data of computer	Return data from VTR	Description of command
[STX] CLP:data [ETX] **Parameters** data = ghmmssff ▊ = Blank: With a positive value − sign: With a negative value h = 0~9: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	[STX] CLP [ETX]	Presets the designated counter value on the CTL counter. The value will be corrected as follows if the non-drop frame preset value has been set while the drop frame mode is established. 00:01:00:00 → 00:00:59:28 00:01:00:01 → 00:00:59:29 <Note> This command is ignored while a search control command is being processed or while the tape is being ejected.
[STX] CRN:m [ETX] **Parameters** m = 0: TC & UB 1: TC 2: UB	[STX] CRN [ETX]	Sets the signal to be regenerated when the TCG (time code generator) is set to the regeneration mode. <Note> This command is ignored while a search control command is being processed.
[STX] CRR [ETX]	[STX] CRR [ETX]	Uses the TCG in the REC RUN mode. The TCG counts up during recording. The default value can be set using the CTS command. <Note> This command is ignored while a search control command is being processed, during recording and in the INSERT mode.
[STX] CRT [ETX]	[STX] CRT [ETX]	Resets the CTL counter data. <Note> This command is ignored while a search control command is being processed.
[STX] CTC [ETX]	[STX] CTC [ETX]	Uses the reference data for searching and for the display mode of the counter display as the time code data. <Note> This command is ignored while a search control command is being processed.
[STX] CTF [ETX]	[STX] CTF [ETX]	Uses the TCG in the FREE RUN mode. The TCG continues to count up at all times regardless of the mode. The default value can be set using the CTS command. The TCG starts counting up upon completion of the settings and when the VTR's power is turned back on. <Note> This command is ignored while a search control command is being processed, during recording and in the INSERT mode.
[STX] CTL [ETX]	[STX] CTL [ETX]	Uses the reference data for searching and for the display mode of the counter display as the CTL data. <Note> This command is ignored while a search control command is being processed.
[STX] CTM:m [ETX] **Parameters** m = 0: REC RUN mode 1: FREE RUN mode 2: Regeneration mode 3: External VITC mode	[STX] CTM [ETX]	Sets the mode used by the TCG. <Note> This command is ignored while a search control command is being processed, during recording and in the INSERT mode.

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■ Counter control commands

Sends data of computer	Return data from VTR	Description of command
[STX] CTP [ETX]	[STX] CTP [ETX]	Uses the TCG in the preset mode. The TCG starts counting up in the REC RUN mode upon completion of the settings. <Note> This command is ignored while a search control command is being processed, during recording and in the INSERT mode.
[STX] CTR [ETX]	[STX] CTR [ETX]	Uses the TCG in the regeneration mode. <Note> This command is ignored while a search control command is being processed, during recording and in the INSERT mode.
[STX] CTS:data [ETX] **Parameters** data = hhmmssff hh = 00~23: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	[STX] CTS [ETX]	Presets the TCG data. The value will be corrected as follows if the non-drop frame preset value has been set while the drop frame mode is established. 00:01:00:00 → 00:00:59:28 00:01:00:01 → 00:00:59:29 Error code ER001 is returned from the VTR when the TCG is used in the regeneration mode or external VITC mode. <Note> This command is ignored while a search control command is being processed.
[STX] CUS:data [ETX] **Parameters** data = $U_7U_6U_5U_4U_7U_3U_2U_1U_0$ The input user bit data is set in ASCII code. UB data: Binary 4BIT×8 ↓ ASCII code: 0~9, A~F	[STX] CUS [ETX]	Presets the user's bit data in the TCG. Error code ER001 is returned from the VTR when the TCG is used in the regeneration mode or external VITC mode. <Note> This command is ignored while a search control command is being processed.
[STX] CVP:data [ETX] **Parameters** data = ppqq pp = 10~20: Insertion line 1 qq = 10~20: Insertion line 2 pp ≠ qq (the same value cannot be designated for both pp and qq)	[STX] CVP [ETX]	Specifies two lines where the external VITC signal is to be inserted. <Note> This command is ignored while a search control command is being processed, during recording and in the INSERT mode.

■ Display control commands

Sends data of computer	Return data from VTR	Description of command
[STX] DFC:m [ETX] **Parameters** m = C: CTL mode T: TC mode U: UB mode R: REMAIN mode	[STX] DFC [ETX]	Sets the display mode of the counter display and the reference data for searching. **CTL data reference:** CTL mode **TC data reference:** TC mode, UB mode, REMAIN mode <Note> This command is ignored while a search control command is being processed.

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■ Edit control commands

Sends data of computer	Return data from VTR	Description of command
[STX] EAB:m [ETX] **Parameters** m = N: AUTO BACK ON F: AUTO BACK OFF	[STX] EAB [ETX]	Sets whether auto back recording is to be performed to ensure frame to frame continuity. **<Note>** This command is ignored while a search control command is being processed and during auto back.
[STX] EAD:m [ETX] **Parameters** m = 0: CH1 & CH2 1: CH1 2: CH2 No parameter: CH1 & CH2	[STX] EAD [ETX]	Sets the VTR to the AUDIO INSERT PAUSE mode. When the VTR is in the VIDEO INSERT PAUSE mode, the command sets it to the AUDIO/VIDEO INSERT PAUSE mode. When it is in the REC INHIBIT mode, error code ER001 is returned from the VTR and the VTR is set to the STOP mode. **<Note>** This command can be accepted when the VTR is in the PLAY PAUSE mode or STILL mode.
[STX] EIN [ETX]	[STX] EIN [ETX]	Sets the VTR to the VIDEO INSERT PAUSE mode. When the VTR is in the AUDIO INSERT PAUSE mode, the command sets it to the AUDIO/VIDEO INSERT PAUSE mode. When it is in the REC INHIBIT mode, error code ER001 is returned from the VTR and the VTR is set to the STOP mode. **<Note>** This command can be accepted when the VTR is in the PLAY PAUSE mode or STILL mode.
[STX] EFE:data [ETX] **Parameters** data = wghmmssff w = M: Mode for recording for 26 seconds E: Mode for recording as far as the tape end ghmmssff = Reference point during editing (recording start point) ● **When the CTL data is to be used as the reference** g = Blank: With a positive value – sign: With a negative value h = 0~9: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames ● **When the TC data is to be used as the reference** gh = 00~23: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	[STX] EFE [ETX]	Initiates first edit (recording to prepare the tape to be used for editing). In order to conduct editing with the position designated by the parameter as the reference point for editing, TC or CTL is preset using the value 23 seconds before the reference point, and the black burst video signal and muted audio signals are recorded for 26 seconds or until the tape end. If the OSP (STOP) command has been issued during operation, error code ER123 will be returned from the VTR which is then set to the STOP mode. If the VTR's operation mode has been changed by operating the controls on its front panel, error code ER121 will be returned from the VTR which is then set to the STOP mode. If the tape end position is reached during operation, error code ER120 will be returned from the VTR which is then set to the STOP mode. **<Note>** This command is ignored while a search control command is being processed and in any of the following modes. EJECT, REC, REC PAUSE, INSERT, INSERT PAUSE

<Note>
Make the menu item changes listed below when performing insert editing or assemble editing. If these changes are not made, the editing operations may not be conducted properly.

Menu item	Setting	Setting command
AUTO BACK	ON	EAB:N
TC MODE	I-REG	CTM:2
TCG REGEN	TC & UB	CRN:0
MEMORY MODE	OFF	SMM:F
STILL TIMER	⊠ min	TST:0200

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■ Media operation control commands

Sends data of computer	Return data from VTR	Description of command
[STX] HRE:m [ETX] **Parameters** m = S: STOP R: REWIND E: EJECT M: REWIND and EJECT	[STX] HRE [ETX]	Sets the VTR's operation mode when the tape end position is reached during recording. **<Note>** This command is ignored while a search control command is being processed.
[STX] HTE:m [ETX] **Parameters** m = S: STOP R: REWIND E: EJECT M: REWIND and EJECT	[STX] HTE [ETX]	Sets the VTR's operation mode when the tape end position is reached during playback. **<Note>** This command is ignored while a search control command is being processed.
[STX] HTI:m [ETX] **Parameters** m = S: STOP W: REWIND P: PLAY M: PLAY PAUSE	[STX] HTI [ETX]	Sets the VTR's operation mode when the tape is inserted. **<Note>** This command is ignored while a search control command is being processed.

■ Input/output control commands

Sends data of computer	Return data from VTR	Description of command
[STX] IEV:data [ETX] **Parameters** data = m1m2 m1 = 0~F: Designates the data of bit 7 to bit 4. m2 = 0~F: Designates the data of bit 3 to bit 0.	[STX] IEV [ETX]	Forcibly switches to the E-E (electric modulation to electric playback) output. When the V-V (VTR to VTR recording) output is the picture output status, it is forcibly switched to the E-E output. The forced E-E output is released and the normal status is restored by IEV:00. **<Note>** This command is ignored while a search control command is being processed.

Parameter	m1 (HEX display)				m2 (HEX display)			
Bits supported	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Switching data	0	0	0	0	AUDIO CH1	AUDIO CH2	VIDEO	TC

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■ Operation control commands

Sends data of computer	Return data from VTR	Description of command
[STX] OAF [ETX]	[STX] OAF [ETX]	Advances the tape frame by frame in the forward direction.
[STX] OAR [ETX]	[STX] OAR [ETX]	Advances the tape frame by frame in the reverse direction.
[STX] OBF [ETX]	[STX] OBF [ETX]	Sets the VTR to the standby OFF mode. <Note> This command can be accepted when the VTR is in the STOP mode, PLAY mode or STILL mode.
[STX] OBN [ETX]	[STX] OBN [ETX]	Sets the VTR to the standby ON (STOP) mode. <Note> This command can be accepted when the VTR is in the standby OFF mode.
[STX] OEJ [ETX]	[STX] OEJ [ETX]	Ejects the cassette tape.
[STX] OFF [ETX]	[STX] OFF [ETX]	Fast forwards the tape.
[STX] OPA [ETX]	[STX] OPA [ETX]	Sets the VTR to the pause mode (REC PAUSE or PLAY PAUSE) or the pause release mode (REC or PLAY).
[STX] OPL [ETX]	[STX] OPL [ETX]	Plays back the tape.
[STX] OPR [ETX]	[STX] OPR [ETX]	Plays the tape (at the shuttle −1× speed) in the reverse direction.
[STX] OPT:data [ETX] **Parameters** data = wghmmssff ● When the CTL data is to be used as the reference w = L : CTL data reference g = Blank: With a positive value − sign: With a negative value h = 0~9: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames ● When the TC data is to be used as the reference w = S: TC data reference gh = 00~23: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	[STX] OPT [ETX]	Plays back the tape to the position designated by the parameter. Upon completion of playback, the VTR is set to the STILL mode. If the designated position is before the current position, the tape is not played back, and the VTR is set to the STILL mode. When the OSP (STOP) command or OEJ (tape EJECT) command is issued during operation, error code ER123 is returned from the VTR. If the VTR's operation mode has been changed by operating the controls on its front panel, error code ER121 will be returned from the VTR. If the tape end position is reached during operation, error code ER120 will be returned from the VTR. <Note> This command is ignored while a search control command is being processed and in any of the following modes. `EJECT, REC, REC PAUSE, INSERT, INSERT PAUSE`
[STX] ORC [ETX]	[STX] ORC [ETX]	Sets the VTR to the recording mode. When the VTR is in the REC INHIBIT mode, error code ER001 will be returned from the VTR which is then set to the STOP mode.
[STX] ORP [ETX]	[STX] ORP [ETX]	Sets the VTR to the REC PAUSE mode. When the VTR is in the REC INHIBIT mode, error code ER001 will be returned from the VTR which is then set to the STOP mode.
[STX] ORW [ETX]	[STX] ORW [ETX]	Rewinds the tape.

<Note>
Refer to the RS-232 mode transition table (on pages 71, 72) for the conditions under which the operation control commands are accepted.

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■ Operation control commands

Sends data of computer	Return data from VTR	Description of command
[STX] OSD [ETX]	[STX] OSD [ETX]	Controls the tape playback speed. Set the VTR to the STILL PAUSE mode using the OSL command, and send the OSD command. Each time the OSD command is sent, the playback speed shifts by one setting in the direction of the arrows below. If the lowest playback speed is already set, the speed does not shift any further, and error code ER001 is returned from the VTR. **In the case of a DVCPRO format tape** +32.0 → +16.0 → +9.5 → +4.1 → +1.85 → +1 → +0.43 → +0.3 → +0.1 +0.03 → STILL → −0.03 → −0.1 → −0.3 → −0.43 → −1 → −1.85 → −4.1 → −9.5 → −16.0 → −32.0 **In the case of a DV format tape** +32.0 → +16.0 → +9.5 → +3.1 → +1.85 → +1 → +0.5 → +0.3 → +0.1 +0.03 → STILL → −0.03 → −0.1 → −0.3 → −0.5 → −1 → −1.85 → −3.1 → −9.5 → −16.0 → −32.0
[STX] OSF:n [ETX] **Parameters** ● In the case of a DVCPRO format tape n = 0: STILL 6: ×1.85 1: ×0.03 7: ×4.1 2: ×0.1 8: ×9.5 3: ×0.3 9: ×16.0 4: ×0.43 A: ×32.0 5: ×1 ● In the case of a DV format tape n = 0: STILL 6: ×1.85 1: ×0.03 7: ×3.1 2: ×0.1 8: ×9.5 3: ×0.3 9: ×16.0 4: ×0.5 A: ×32.0 5: ×1	[STX] OSF [ETX]	Sets the tape playback speed in the forward direction.
[STX] OSL [ETX]	[STX] OSL [ETX]	Sets the VTR to the STILL PAUSE mode. The OSD command and OSU command are accepted after the VTR has been set to the STILL PAUSE mode by the OSL command.
[STX] OSP [ETX]	[STX] OSP [ETX]	Sets the VTR to the STOP mode. When the VTR is in the STANDBY OFF mode, it is set to STANDBY ON.

<Note>
Refer to the RS-232 mode transition table (on pages 71, 72) for the conditions under which the operation control commands are accepted.

■ Operation control commands

Sends data of computer	Return data from VTR	Description of command

[STX] OSR:n [ETX]
Parameters
● In the case of a DVCPRO format tape
 	
n = 0: STILL   6: ×1.85
   1: ×0.03 7: ×4.1
   2: ×0.1   8: ×9.5
   3: ×0.3   9: ×16.0
   4: ×0.43 A: ×32.0
   5: ×1
 	
● In the case of a DV format tape
 	
n = 0: STILL   6: ×1.85
   1: ×0.03 7: ×3.1
   2: ×0.1   8: ×9.5
   3: ×0.3   9: ×16.0
   4: ×0.5   A: ×32.0
   5: ×1
	[STX] OSR [ETX]	Sets the tape playback speed in the reverse direction.

[STX] OSU [ETX]	[STX] OSU [ETX]	Controls the tape playback speed. Set the VTR to the STILL PAUSE mode using the OSL command, and send the OSU command. Each time the OSU command is sent, the playback speed shifts by one setting in the direction of the arrows below. If the highest playback speed is already set, the speed does not shift any further, and error code ER001 is returned from the VTR. **In the case of a DVCPRO format tape** −32.0 → −16.0 → −9.5 → −4.1 → −1.85 → −1 → −0.43 → −0.3 → −0.1 −0.03 → STILL → +0.03 → +0.1 → +0.3 → +0.43 → +1 → +1.85 → +4.1 → +9.5 → +16.0 → +32.0 **In the case of a DV format tape** −32.0 → −16.0 → −9.5 → −3.1 → −1.85 → −1 → −0.5 → −0.3 → −0.1 −0.03 → STILL → +0.03 → +0.1 → +0.3 → +0.5 → +1 → +1.85 → +3.1 → +9.5 → +16.0 → +32.0

[STX] OTE:m [ETX]
Parameters
m = E:
  E-E (Electric modulation to Electric play back)
m = T:
  V-V (VTR to VTR recording)
	[STX] OTE [ETX]	Selects whether to set E-E output or V-V output when the VTR is in the STOP mode, FF mode or REW mode.

<Note>
Refer to the RS-232 mode transition table (on pages 71, 72) for the conditions under which the operation control commands are accepted.

■ Query control commands

Sends data of computer	Return data from VTR	Description of command
[STX] QAL [ETX]	[STX] ALV0 [ETX]	Supports only address level 0 of the MIS standards.

[STX] QAO [ETX]	[STX] AOm [ETX]
	m = 1: CH1
	   2: CH2
	   3: CH3
	   4: CH4
	   5: CH1 & CH2
	   6: CH3 & CH4
	   7: CH1+3 & CH2+4
		Queries the audio signal output channel or channels.

[STX] QCA [ETX]	[STX] CUPdata [ETX] data = $U_7U_6U_5U_4U_7U_3U_2U_1U_0$	Queries the user's bit data which was preset in the TCG.
[STX] QCB [ETX]	[STX] CUSdata [ETX] data = $U_7U_6U_5U_4U_7U_3U_2U_1U_0$	Queries the user's bit data of the TCG.

[STX] QCC [ETX]	[STX] CCPdata [ETX]
	data = ghmmss
	● In the case of CTL data
	g = Blank: With a positive value
	    − sign: With a negative value
	h = 0~9: Hours
	mm = 00~59: Minutes
	ss = 00~59: Seconds
	● In the case of TC data
	gh = 00~23: Hours
	mm = 00~59: Minutes
	ss = 00~59: Seconds
		Queries the current counter data (second increments).
		The following data is returned from the VTR, depending on the mode which appears on the counter display.
		CTL mode:
		  CTL data
		TC mode, UB mode, REMAIN mode:
		  TC data

[STX] QCD [ETX]	[STX] CDdata [ETX]
	data = fwghmmssff
	● In the case of CTL data
	f = F: Fine
	    C: Coarse
	w = S: Search STILL
	    P: Search PLAY
	g = Blank: With a positive value
	    − sign: With a negative value
	h = 0~9: Hours
	mm = 00~59: Minutes
	ss = 00~59: Seconds
	ff = 00~29: Frames
	● In the case of TC data
	f = F: Fine
	    C: Coarse
	w = S: Search STILL
	    P: Search PLAY
	gh = 00~23: Hours
	mm = 00~59: Minutes
	ss = 00~59: Seconds
	ff = 00~29: Frames
		Queries the current counter data.
		The following data is returned from the VTR, depending on the mode which appears on the counter display.
		CTL mode:
		  CTL data
		TC mode, UB mode, REMAIN mode:
		  TC data

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■ Query control commands

Sends data of computer	Return data from VTR	Description of command
[STX] QCE [ETX]	[STX] CTEdata [ETX] data = hhmmssff hh = 00~23: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	Queries the time data which was preset in the TCG.
[STX] QCF [ETX]	[STX] CDm [ETX] m = N: Drop frame mode F: Non-drop frame mode	Queries the drop frame mode.
[STX] QCM [ETX]	[STX] CHMm [ETX] m = 1: 12-hour mode 2: 24-hour mode	Queries whether the CTL display is in the 12-hour mode or 24-hour mode.
[STX] QCP [ETX]	[STX] CVPdata [ETX] data = ppqq pp = Insertion line 1 qq = Insertion line 2	Queries the setting of the two lines in which the external VITC signal is to be inserted.
[STX] QCR [ETX]	[STX] CRNm [ETX] m = 0: TC & UB 1: TC 2: UB	Queries the REGEN (regeneration) signal when the TCG (time code generator) is set to the regeneration mode.
[STX] QCS [ETX]	[STX] CTSdata [ETX] data = hhmmssff hh = 00~23: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	Queries the TCG's time data.
[STX] QCT [ETX]	[STX] CTdata [ETX] data = mm mm = FR: Regeneration mode RP: REC RUN mode FP: FREE RUN mode VR: External VITC mode	Queries the mode in which the TCG is to be used.
[STX] QCU [ETX]	[STX] CURdata [ETX] data = U7U6U5U4U7U3U2U1U0	Queries the user's bit data of the TCR.
[STX] QCW [ETX]	[STX] CTMm [ETX] m = 0: REC RUN mode 1: FREE RUN mode 2: Regeneration mode 3: External VITC mode	Queries the mode in which the TCG is to be used.
[STX] QCZ [ETX]	[STX] CTZm [ETX] m = 0: Read NG 1: Read OK	Queries the TCR read status.
[STX] QDF [ETX]	[STX] DFCm [ETX] m = C: CTL mode T: TC mode U: UB mode R: REMAIN mode	Queries the display mode of the counter display.

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■ Query control commands

Sends data of computer	Return data from VTR	Description of command
[STX] QEB [ETX]	[STX] EABm [ETX] m = N: AUTO BACK ON F: AUTO BACK OFF	Queries the auto back recording setting.
[STX] QHC [ETX]	[STX] HCMdata [ETX] data = C1C2C3C4 C1 = I: Cassette in O: Cassette out C2 = E: Recording enabled D: Recording disabled N: No tape C3 = S: S size cassette M: M size cassette L: L size cassette N: No tape C4 = D: DV format P: DVCPRO format C: DVCAM format N: No tape	Queries the cassette tape information.
[STX] QHE [ETX]	[STX] HTEm [ETX] m = S: STOP R: REWIND E: EJECT M: REWIND and EJECT	Queries the VTR's operation mode when the tape end position has been reached during any operation except recording.
[STX] QHI [ETX]	[STX] HTIm [ETX] m = S: STOP W: REWIND P: PLAY M: PLAY PAUSE	Queries the VTR's operation mode when the tape has been inserted.
[STX] QHR [ETX]	[STX] HTRdata [ETX] data = hhmmss hh = 00~23: Hours mm = 00~59: Minutes ss = Fixed at 00: Seconds	Queries the amount of remaining tape. If this is not determined or the tape has been ejected, data = FFFFFF is returned.
[STX] QHT [ETX]	[STX] HREm [ETX] m = S: STOP R: REWIND E: EJECT M: REWIND and EJECT	Queries the VTR's operation mode when the tape end position is reached during recording.
[STX] QIC [ETX]	[STX] 1 [ETX]	Queries the product classification code. This unit returns tape equipment "1."
[STX] QID [ETX]	[STX] data [ETX] data = AJ-D250 AJ-D230	Queries the equipment's ID code. The ID code corresponding to the setting of Setup Menu No. 205 "232C ID SEL" is returned. (See page 30) With the factory settings, tape equipment "AJ-D250" is returned.

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■ Query control commands

Sends data of computer	Return data from VTR	Description of command
[STX] QIE [ETX]	[STX] IEVdata [ETX] data = m1m2 m1 = 0~F: Designates the data of bit 7 to bit 4. m2 = 0~F: Designates the data of bit 3 to bit 0.	Queries the forced E-E output setting.

Parameter	m1 (HEX display)				m2 (HEX display)			
Bits supported	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Switching data	0	0	0	0	AUDIO CH1	AUDIO CH2	VIDEO	TC

Sends data of computer	Return data from VTR	Description of command
[STX] QLH:m [ETX] Parameters m = D: Cumulative drum rotation time T: Cumulative capstan rotation time No parameter: Cumulative drum rotation time (4 digits)	[STX] LHRdata [ETX] data = mhhhhh m = D: Drum T: Capstan hhhhh = 00000~99999: Cumulative rotation time ● With no parameter The drum's cumulative rotation time is returned as a 4-digit value. data = hhhh hhhh = 0000~9999: Cumulative rotation time	Queries the current value of the hours meter.
[STX] QOT [ETX]	[STX] OTEm [ETX] m = E: E-E (Electric modulation to Electric play back) m = T: V-V (VTR to VTR recording)	Queries whether to set to the E-E output or V-V output when the VTR is in the STOP mode, FF mode or REW mode.

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■ Query control commands

Sends data of computer	Return data from VTR	Description of command
[STX] QOP [ETX]	[STX] data [ETX] data = OSP: STOP OEJ: EJECT OFF: FAST FORWARD ORW: REWIND OSF: SHUTTLE FORWARD OSR: SHUTTLE REVERSE OSS: STILL OPL: PLAY OPP: PLAY PAUSE ORC: REC ORP: REC PAUSE OBF: STANDBY OFF SCS: COUNTER SEARCH (STILL) SCP: COUNTER SEARCH (PLAY) SRS: COUNTER SEARCH (STILL) SUB: UB SEARCH SPT: PLAY to OPT: PLAY to SMS: MEMORY SEARCH EAD: AUDIO INSERT EAP: AUDIO INSERT PAUSE EIN: VIDEO INSERT EIP: VIDEO INSERT PAUSE EVI: AUDIO & VIDEO INSERT EVP: AUDIO & VIDEO INSERT PAUSE EFE: FIRST EDIT	Queries the VTR's operation mode. The current VTR mode is detected, and the status command is returned.
[STX] QOD:d1d2 [ETX] Parameters d1 = 0~F: Designates the status data number. d2 = 0~F: Designates the number of status data bytes.	[STX] OASdata [ETX] data = AD0AD1AD2AD3AD4AD5AD6AD7AD8 AD9ADAADBADCAD0ADEADF <Note> Refer to the bitmap table (A) for details of AD ∗.	Queries the operation modes. The current VTR mode is detected, and the bitmap information is returned. The bitmap information is converted into ASCII code and returned by the VTR. <Note> When a setting exceeding ADDRESSF has been set by the parameter, no guarantees are given for the data following ADDRESSF.

● Bitmap table (A)

ADDRESS	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
AD 0	0	0	CASSETTE OUT	RF VIDEO MISSING	TAPE TROUBLE	HARD ERROR	0	LOCAL or MENU
AD 1	STANDBY	0	STOP	EJECT	REW	FF	REC	PLAY
AD 2	SERVO LOCK	0	SHUTTLE	0	0	TAPE DIRECTION	STILL	CUE UP COMPLETE
AD 3	0	0	0	0	0	0	0	0
AD 4	SELECT EE	FULL EE	0	EDIT	0	0	0	CUE UP
AD 5	0	INSERT	0	VIDEO	0	0	AUDIO CH2	AUDIO CH1
AD 6	0	LAMP STILL	LAMP FWD	LAMP REW	LAMP SPEED3	LAMP SPEED2	LAMP SPEED1	LAMP SPEED0
AD 7	0	0	0	0	0	0	0	0
AD 8	0	0	0	0	0	0	0	REC INHIBIT
AD 9	0	0	0	0	0	0	0	0
AD A	0	0	0	0	0	0	0	0
AD B	0	0	0	0	0	0	0	0
AD C	0	0	0	0	0	0	0	0
AD D	0	0	0	0	0	0	0	0
AD E	0	0	0	0	0	0	0	0
AD F	0	0	0	0	0	0	0	0

■ Query control commands

Sends data of computer	Return data from VTR	Description of command
[STX] QOS [ETX]	[STX] OPSdata [ETX] data = AD0AD1AD2AD3AD4 <Note> Refer to the bitmap table (B) for details of AD ∗.	Queries the operation modes. The current VTR mode is detected and sent by the bitmap information. The bitmap information is converted into ASCII code and returned by the VTR.
[STX] QRA [ETX]	[STX] RAm [ETX] m = N: ACK ON F: ACK OFF	Queries the ACK (Acknowledge) code response setting.
[STX] QRS [ETX]	[STX] RSEm [ETX] m = 0: Normal 1: No completion command 2: No completion command/No error	Queries the search end mode setting.
[STX] QRV:m [ETX] Parameters m = A: AV system control ROM version S: Sub-code microcomputer version C: Cylinder servo ROM version R: Reel servo ROM version I: Interface ROM version No parameter: Interface ROM version	[STX] VERdata [ETX] data = d1d2.d3d4-d5d6-d7.d8d9 d1~d9: Software program version	Queries the software program version used for each microcomputer.
[STX] QSM [ETX]	[STX] SMMm [ETX] m = S: MEMORY STOP O: REPEAT ONE TIME A: CONTINUE F: OFF	Queries the memory mode.
[STX] QSY [ETX]	[STX] SMILPdata [ETX] data = wwghmmssff ww = LP: CTL data reference SP: TC data reference g = Blank: With a positive value – sign: With a negative value h = 0~9: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	Queries the counter value stored in the memory.

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● Bitmap table (B)

ADDRESS	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
AD 0	FULL EE	SELECT EE	0	0	0	0	TAPE END (∗)	TAPE TOP (∗)
AD 1	SHORT PLAY	0	STANDBY	0	0	0	0	SERVO LOCK
AD 2	REC INHIBIT TAB	CASSETTE IN/OUT	0	VTR STATUS				
AD 3	TAPE DIRECTION	SHUTTLE SPEED						
AD 4	0	INSERT VIDEO	INSERT AUDIO CH1	INSERT AUDIO CH2	0	0	0	0

<Note ∗ >
"1" is used as the TAPE END bit and TAPE TOP bit when the tape start or end is detected, and the bits are cleared to "0" when queried by the QOS command.

VTR STATUS DATA

BIT4 ~ BIT0	VTR STATUS	BIT4 ~ BIT0	VTR STATUS
1, 1, 1, 1, 1	INSERT PAUSE	0, 1, 0, 0, 1	PLAY PAUSE
1, 1, 1, 1, 0	INSERT	0, 1, 0, 0, 0	PLAY
0, 1, 1, 1, 0	SEARCH	0, 0, 0, 1, 1	FAST FORWARD
0, 1, 1, 0, 1	AUDIO INSERT PAUSE	0, 0, 0, 1, 0	REWIND
0, 1, 1, 0, 0	AUDIO INSERT	0, 0, 0, 0, 1	EJECT
0, 1, 0, 1, 1	RECORDING PAUSE	0, 0, 0, 0, 0	STOP
0, 1, 0, 1, 0	RECORDING		

SHUTTLE SPEED DATA

BIT4 ~ BIT0	SHUTTLE SPEED	BIT4 ~ BIT0	SHUTTLE SPEED
60	(±) 9.5× or more	2A	(±) 0.2× or more but less than (±) 0.43×
59	(±) 3.0× or more but less than (±) 9.5×	20	(±) 0.1× or more but less than (±) 0.2×
4A	(±) 1.85× or more but less than (±) 3.0×	13	(±) 0.03× or more but less than (±) 0.1×
40	(±) 1.0× or more but less than (±) 1.85×	00	STILL
36	(±) 0.43× or more but less than (±) 1.0×		

■ Query control commands

Sends data of computer	Return data from VTR	Description of command
[STX] QSP:m [ETX] Parameters m = B: BEGIN point E: END point	[STX] SMPdata [ETX] data = pw:ghmmssff ● When CTL data is to be used as the reference pw = BP: BEGIN point EP: END point g = Blank: With a positive value – sign: With a negative value h = 0~9: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames ● When TC data is to be used as the reference pw = BP: BEGIN point EP: END point gh = 00~23: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	Queries the repeat position which has been stored in the memory. Error code ER001 is returned from the VTR when the data has not been entered.
[STX] QTT [ETX]	[STX] TSTdata [ETX] data = mmmm mmmm = 0000: 0.5 sec. 0005: 5 sec. 0010: 10 sec. 0030: 30 sec. 0100: 1 min. 0200: 2 min.	Queries the standby OFF timer which has been stored in the memory.
[STX] QVI [ETX]	[STX] VIm [ETX] m = L: LINE S: S-VIDEO D: OPTION	Queries the position of the INPUT SELECT switch.
[STX] QVM [ETX]	[STX] VMDm [ETX] m = A: Color B: Monochrome	Queries the color mode.

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■ Communication control commands

Sends data of computer	Return data from VTR	Description of command
[STX] RAN [ETX]	[STX] RAN [ETX]	Enables the return of the ACK (Acknowledge) code. <Note> This command is ignored while a search control command is being processed.
[STX] RAF [ETX]	[STX] RAF [ETX]	Disables the return of the ACK (Acknowledge) code. <Note> This command is ignored while a search control command is being processed.
[STX] RCK [ETX]	[STX] RCK [ETX]	Checks whether communication is established. <Note> This command is ignored while a search control command is being processed.

[STX] RSE:m [ETX]
Parameters
m =
 0: Normal
 1: No completion command
 2: No completion command/No
   error
	[STX] RSE [ETX]	Sets the send timing and enable or disable for sending the search completion command.
		● **Parameter setting: normal**
		 When search is commenced:
		  ACK code is returned.
		 When search is completed:
		  [STX] ⃞ ⃞ ⃞ [ETX] is returned.
		 When search is aborted:
		  [STX] ER⃞ ⃞ ⃞ [ETX] is returned.
		● **Parameter setting: no completion command**
		 When search is commenced:
		  ACK code is returned, and then [STX] ⃞ ⃞ ⃞ [ETX] is returned.
		 When search is completed:
		  No return.
		 When search is aborted:
		  [STX] ER⃞ ⃞ ⃞ [ETX] is returned.
		● **Parameter setting: no completion command/no error**
		 When search is commenced:
		  ACK code is returned, and then [STX] ⃞ ⃞ ⃞ [ETX] is returned.
		 When search is completed:
		  No return.
		 When search is aborted:
		  No return.
		<Note>
		This command is ignored while a search control command is being processed.

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■ Search control commands

Sends data of computer	Return data from VTR	Description of command
[STX] SCP:data [ETX] Parameters data = ghmmssff ● When CTL data is to be used as the reference g = Blank: With a positive value – sign: With a negative value h = 0~9: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames ● When TC data is to be used as the reference gh = 00~23: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	[STX] SCP [ETX]	Searches the counter value which was designated by the parameter. Playback is commenced upon completion of the search. If the designated position is an illegal position (the target position does not exist), error code ER122 will be returned from the VTR, which is then set to the STOP mode. When the OSP (STOP) command or OEJ (tape EJECT) command is issued during operation, error code ER123 is returned from the VTR. If the VTR's operation mode has been changed by operating the controls on its front panel, error code ER121 will be returned from the VTR. If the tape end position is reached during operation, error code ER120 will be returned from the VTR. When data differing from the data used as the reference has been sent, error code ER001 will be returned from the VTR. <Note> This command is ignored while a search control command is being processed and in any of the following modes. ┌─────────────────────────────────┐ │ EJECT, REC, REC PAUSE, INSERT, INSERT PAUSE │ └─────────────────────────────────┘
[STX] SCS:data [ETX] Parameters data = ghmmssff ● When CTL data is to be used as the reference g = Blank: With a positive value – sign: With a negative value h = 0~9: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames ● When TC data is to be used as the reference gh = 00~23: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	[STX] SCS [ETX]	Searches the counter value which was designated by the parameter. The STILL mode is established upon completion of the search. If the designated position is an illegal position (the target position does not exist), error code ER122 will be returned from the VTR which is then set to the STOP mode. When the OSP (STOP) command or OEJ (tape EJECT) command is issued during operation, error code ER123 is returned from the VTR. If the VTR's operation mode has been changed by operating the controls on its front panel, error code ER121 will be returned from the VTR. If the tape end position is reached during operation, error code ER120 will be returned from the VTR. When data differing from the data used as the reference has been sent, error code ER001 will be returned from the VTR. <Note> This command is ignored while a search control command is being processed and in any of the following modes. ┌─────────────────────────────────┐ │ EJECT, REC, REC PAUSE, INSERT, INSERT PAUSE │ └─────────────────────────────────┘

■ Search control commands

Sends data of computer	Return data from VTR	Description of command
[STX] SMI:data [ETX] **Parameters** data = wwghmmssff ● When the counter value is to be stored in the memory ww = LC: CTL data reference SC: TC data reference "ghmmssff" is omitted. ● When the parameter value for which the CTL data serves as the reference is to be stored in the memory ww = LP: CTL data reference g = Blank: With a positive value – sign: With a negative value h = 0~9: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames ● When the parameter value for which the TC data serves as the reference is to be stored in the memory ww = SP: TC data reference gh = 00~23: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames	[STX] SMI [ETX]	Stores the counter value and parameter value in the memory at the time when this command is received. <Note> This command is ignored while a search control command is being processed.
[STX] SMM:m [ETX] **Parameters** m = S: MEMORY STOP O: REPEAT ONE TIME A: CONTINUE F: OFF	[STX] SMM [ETX]	Sets the memory mode. <Note> This command is ignored while a search control command is being processed.

Sends data of computer	Return data from VTR	Description of command
[STX] SMP:data [ETX] **Parameters** data = pww:ghmmssff ● When the counter value is to be stored in the memory p = B: BEGIN point E: END point ww = LC: CTL data reference SC: TC data reference "ghmmssff" is omitted. ● When the parameter value for which the CTL data serves as the reference is to be stored in the memory p = B: BEGIN point E: END point ww = LP: CTL data reference g = Blank: With a positive value – sign: With a negative value h = 0~9: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames ● When the parameter value for which the TC data serves as the reference is to be stored in the memory p = B: BEGIN point E: END point ww = SP: TC data reference gh = 00~23: Hours mm = 00~59: Minutes ss = 00~59: Seconds ff = 00~29: Frames ● When the designated position is not to be entered data = BN: No entry of BEGIN point EN: No entry of END point	[STX] SMP [ETX]	Sets the repeat position. When the BEGIN point and END point have been designated in different modes, they are converted inside the VTR and set in the mode which was last designated. Parameter "ff" is processed as "00" inside the VTR. <Note> This command is ignored while a search control command is being processed.

■ Search control commands

Sends data of computer	Return data from VTR	Description of command
[STX] SMS [ETX]	[STX] SMS [ETX]	Searches the counter value at the time when the command stored in the memory was received. The STILL mode is established upon completion of the search. If the designated position is an illegal position (the target position does not exist), error code ER122 will be returned from the VTR which is then set to the STOP mode. When the OSP (STOP) command or OEJ (tape EJECT) command is issued during operation, error code ER123 is returned from the VTR. If the VTR's operation mode has been changed by operating the controls on its front panel, error code ER121 will be returned from the VTR. If the tape end position is reached during operation, error code ER120 will be returned from the VTR. When data differing from the data used as the reference has been sent or when the counter value has not been stored in the memory, error code ER001 will be returned from the VTR. <Note> This command is ignored while a search control command is being processed and in any of the following modes. EJECT, REC, REC PAUSE, INSERT, INSERT PAUSE
[STX] SPT:data [ETX] **Parameters** data = ghmmssff ● **When CTL data is to be used as the reference** g = Blank: With a positive value 　　– sign: With a negative value h = 　0~9: 　Hours mm = 00~59: Minutes ss = 　00~59: Seconds ff = 　00~29: Frames ● **When TC data is to be used as the reference** gh = 　00~23: Hours mm = 00~59: Minutes ss = 　00~59: Seconds ff = 　00~29: Frames	[STX] SPT [ETX]	Plays the tape to the position which was designated by the parameter. The VTR is set to the STILL mode upon completion of playback. If the designated position is before the current position, the tape is not played back, and the VTR is set to the STILL mode. When the OSP (STOP) command or OEJ (tape EJECT) command is issued during operation, error code ER123 is returned from the VTR. If the VTR's operation mode has been changed by operating the controls on its front panel, error code ER121 will be returned from the VTR. If the tape end position is reached during operation, error code ER120 will be returned from the VTR. <Note> This command is ignored while a search control command is being processed and in any of the following modes. EJECT, REC, REC PAUSE, INSERT, INSERT PAUSE

■ Search control commands

Sends data of computer	Return data from VTR	Description of command
[STX] SRS:data [ETX] **Parameters** data = wghmmssff ● **When CTL data is to be used as the reference** w = L: CTL data reference g = Blank: With a positive value 　　– sign: With a negative value h = 　0~9: 　Hours mm = 00~59: Minutes ss = 　00~59: Seconds ff = 　00~29: Frames ● **When TC data is to be used as the reference** w = 　S: TC data reference gh = 　00~23: Hours mm = 00~59: Minutes ss = 　00~59: Seconds ff = 　00~29: Frames	[STX] SRS [ETX]	Searches the counter value which was designated by the parameter. The STILL mode is established upon completion of the search. If the designated position is an illegal position (the target position does not exist), error code ER122 will be returned from the VTR, which is then set to the STOP mode. When the OSP (STOP) command or OEJ (tape EJECT) command is issued during operation, error code ER123 is returned from the VTR. If the VTR's operation mode has been changed by operating the controls on its front panel, error code ER121 will be returned from the VTR. If the tape end position is reached during operation, error code ER120 will be returned from the VTR. When data differing from the data used as the reference has been sent, error code ER001 will be returned from the VTR. <Note> This command is ignored while a search control command is being processed and in any of the following modes. EJECT, REC, REC PAUSE, INSERT, INSERT PAUSE
[STX] SUB:data [ETX] **Parameters** data = uuuuuuuu:d u = 0~F: User's bit value ("＊" is designated for a user's bit value which is not going to be searched) d = 　F: Forward direction 　　R: Reverse direction	[STX] SUB [ETX]	Searches the start position of the user's bit which was designated by the parameter. The STILL mode is established upon completion of the search. The search is enabled when the same user's bit value continues for at least 5 seconds. When the OSP (STOP) command or OEJ (tape EJECT) command is issued during operation, error code ER123 is returned from the VTR. If the VTR's operation mode has been changed by operating the controls on its front panel, error code ER121 will be returned from the VTR. If the tape end position is reached during operation, error code ER120 will be returned from the VTR. <Note> This command is ignored while a search control command is being processed and in any of the following modes. EJECT, REC, REC PAUSE, INSERT, INSERT PAUSE

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■ Timer control commands

Sends data of computer	Return data from VTR	Description of command
[STX] TST:data [ETX] Parameters data = mmmm mmmm = 　0000:　0.5 sec. 　0005:　5 sec. 　0010:　10 sec. 　0030:　30 sec. 　0100:　1 min. 　0200:　2 min.	[STX] TST [ETX]	Sets the standby OFF timer. <Note> This command is ignored while a search control command is being processed.

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■ Mode transition table

Return command	VTR STATUS											
	STOP	STANDBY OFF	EJECT	PLAY	REW	FF	PLAY PAUSE	REC	REC PAUSE	SHORT PLAY	AUTO BACK	SEARCH
OSP	—	○	×	○	○	○	○	○	○	○	○	○
OEJ	○	○	—	○	○	○	○	×	×	×	×	○
OPL	○	○	×	—	○	○	○	×	×	×	×	○
ORW	○	○	×	○	—	○	○	○	○	○	○	○
OFF	○	○	×	○	○	—	○	○	○	○	○	○
OPA	○	○	×	○	○	○	PLAY	REC PAUSE	REC	REC PAUSE	REC	○
ORC	○	○	×	○	○	○	○	—	○	○	○	○
ORP	○	○	×	○	×	×	○	○	—	○	○	×
EIN	×	×	×	×	×	×	○	×	×	×	×	×
EAD	×	×	×	×	×	×	○	×	×	×	×	×
EFE	○	○	×	○	○	○	○	×	×	×	×	○
OAF	×	×	×	×	×	×	○	×	×	×	×	×
OAR	×	×	×	×	×	×	○	×	×	×	×	×
OPR	○	○	×	○	○	○	○	×	×	×	×	○
OSL	○	○	×	○	○	○	○	×	×	×	×	○
OSF	○	○	×	○	○	○	○	×	×	×	×	○
OSR	○	○	×	○	○	○	○	×	×	×	×	○
Search commands	○	○	×	○	○	○	○	×	×	×	×	○

<Notes>
　○　: Operation changes to the return command mode.
　×　: Error code ER001 is returned, and execution is disabled.
　—　: The operation mode is maintained.

OPA command:　　The current operation mode may be replaced by another operation mode when the OPA command is issued.
Search commands: OPT, SCP, SCS, SMS, SPT, SRS, SUB

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■ Mode transition table

Return command	VTR STATUS								
	STILL	VIDEO INSERT	VIDEO INSERT PAUSE	AUDIO INSERT	AUDIO INSERT PAUSE	A/V INSERT	A/V INSERT PAUSE	FIRST EDIT	Processing Search Command (Cue Up, etc.)
OSP	○	○	○	○	○	○	○	○	○
OEJ	○	×	×	×	×	×	×	×	○
OPL	○	×	×	×	×	×	×	×	×
ORW	○	×	×	×	×	×	×	×	×
OFF	○	×	×	×	×	×	×	×	×
OPA	PLAY	PLAY PAUSE	VIDEO INSERT	PLAY PAUSE	AUDIO INSERT	PLAY PAUSE	A/V INSERT	×	×
ORC	○	×	×	×	×	×	×	×	×
ORP	○	×	×	×	×	×	×	×	×
EIN	○	×	—	×	A/V INSERT PAUSE	×	—	×	×
EAD	○	×	A/V INSERT PAUSE	×	—	×	—	×	×
EFE	○	×	×	×	×	×	×	×	×
OAF	×	×	×	×	×	×	×	×	×
OAR	×	×	×	×	×	×	×	×	×
OPR	○	×	×	×	×	×	×	×	×
OSL	○	×	×	×	×	×	×	×	×
OSF	○	×	×	×	×	×	×	×	×
OSR	○	×	×	×	×	×	×	×	×
Search commands	○	×	×	×	×	×	×	×	×

<Notes>
   ○ : Operation changes to the return command mode.
   × : Error code ER001 is returned, and execution is disabled.
   — : The operation mode is maintained.

OPA command: The current operation mode may be replaced by another operation mode when the OPA command is issued.
Search commands: OPT, SCP, SCS, SMS, SPT, SRS, SUB

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(5) Checkpoints for RS-232C communication

■ Send commands and data returned from the VTR

1. If the LOCAL/MENU/REMOTE switch on the front panel is not at the REMOTE position, it is not possible to exercise proper control using the RS-232C interface.
   If any command except a Q (query) command is sent while this switch is not at the REMOTE position, error code ER001 is returned.
2. After one of the following commands is sent, not all commands can be accepted until the processing of the sent command is completed.

   OPT, SCP, SCS, SMS, SPT, SRS, SUB, EFE

   Commands which can be accepted
   ● Q (query) commands
   ● OSP command (STOP)
   ● OEJ command (EJECT)

   Error code ER001 is returned when a command other than one which can be accepted is sent.

■ Send command intervals

The AJ-D250 is a multi-microcomputer VTR. For this reason, it takes time (approx. 150 ms) for communication to be performed between the RS-232C interface microcomputer and system control microcomputer inside the VTR before any processing can be performed by the system control microcomputer inside the VTR.
Therefore, leave an interval of at least 150 ms before sending a command from the computer.

Error Messages

When a problem has occurred in the unit, one of the following error messages will appear on the tape counter.

Error No.	Description
— d —	Condensation (dew) has formed.
E — 00	Appears when the servo fails to lock for 3 or more seconds. When T&S&R is selected as the setup menu item No.001 setting, "SERVO NOT LOCKED" is displayed on the third line (line where the remaining tape amount is indicated) of the monitor screen.
E — 01	Appears when there is no head output for one or more seconds (due to clogging, etc.). "L" is displayed on the first line (counter line) of the monitor screen. When T&S&R is selected as the setup menu item No.001 setting, "LOW RF" is displayed on the third line (line where the remaining tape amount is indicated) of the monitor screen.
E — 09	Appears when a blank area on the tape has been detected. "N" is displayed on the first line (counter line) of the monitor screen. When T&S&R is selected as the setup menu item No.001 setting, "NO RF" is displayed on the third line (line where the remaining tape amount is indicated) of the monitor screen. When all the following conditions are met, the part of the tape is recognized as a blank. • No output from any of the heads • Playback data cannot be read • No CTL signal
E — 11	The reel base which operates in line with the size of the tape has been locked for 2.5 or more seconds.
E — 21	Four or more 4 seconds have elapsed after the cassette was inserted but the cassette is not lowered down inside the unit. Alternatively, 4 or more seconds have elapsed after the eject operation was initiated but the cassette is not ejected.
E — 31	The loading operation is not completed within 4 seconds.
E — 32	The unloading operation is not completed within 4 seconds.
E — 41	The FG signal (rotational speed signal) is not output from the cylinder motor.
E — 42	The PG signal (phase signal) is not output from the cylinder motor.
E — 43	The cylinder motor speed is abnormally high.
E — 44	The cylinder motor speed is abnormally low.

Error No.	Description
E — 51	The FG signal (rotational speed signal) is not output from the capstan motor.
E — 52	The capstan motor speed is abnormally high.
E — 53	The capstan motor speed is abnormally low.
E — 61	The supply (S) reel motor is locked.
E — 62	The take-up (T) reel motor is locked.
E — 63	The supply reel motor speed is abnormally high.
E — 64	The take-up reel motor speed is abnormally low.
E — 65	Abnormal tension has been detected.
E — 66	The start or end processing operation fails to be completed even after 7 or more seconds have elapsed.
E — 67	A communication error between SERVO and AVSYS. Errors in the data.
E — 68	A communication error between SERVO and AVSYS. The data is fixed at high or low.
E — 69	A problem in communication between SERVO and AVSYS when the power was switched on.
E — 6B	This appears when there is a communication error between IF and AVSYS. There is a problem with the internal reference or external reference.
E — 70	The fan motor has stopped. "S" is displayed on the first line (counter line) of the monitor screen. When T&S&R is selected as the setup menu item No.001 setting, "FAN STOP" is displayed on the third line (line where the remaining tape amount is indicated) of the monitor screen. When about an hour elapses, the unit is shut down automatically.
E — 72	There is a problem in the solenoid drive circuit.
E — 73	There is a problem in the cleaning solenoid drive circuit.

Emergency Eject

Procedure for removing the tape manually in an emergency

Use the procedure below to remove the cassette tape if it can not be removed even when the EJECT button is pressed.
• Before proceeding to eject the tape manually, you must first turn off the power to the unit.

❶ Remove the top panel.

❷ Use a Philips head screwdriver to push in and turn the red plastic screw part counterclockwise.
(This screw needs to be rotated about 30 turns before unloading can be started.)

❸ Insert the take-up jig (packed with the unit) into the tape ejection slot (on the mechanism side of the VTR), and rotate the flange part (white gear) of the supply reel in the take-up direction using the rubber part of the take-up jig to take up the tape slack.
<Note>
Take care not to damage the tape in any way.

❹ Use the Phillips head screwdriver to push in and turn the red plastic screw part counterclockwise once more. Again rotate the flange part of the supply reel in the take-up direction to take up the tape slack.
This two-step procedure needs to be repeated until the tape is completely housed in the cassette case (about 90 turns of the red plastic screw part).

❺ Use the Phillips head screwdriver to turn the red plastic screw part at the slot-in side clockwise to eject the cassette tape.
(This screw needs to be rotated through about 140 turns until the tape is ejected.)
<Note>
Take care not to sandwich or catch the tape when closing the cassette cover.
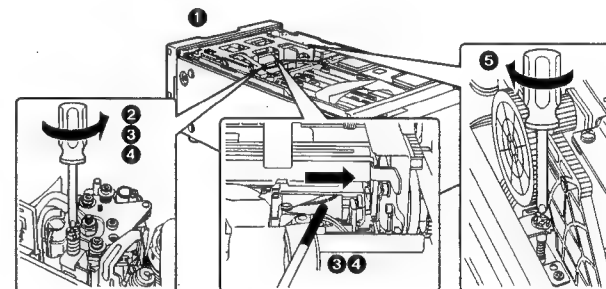
SECTION 2

SERVICE INFORMATION

CONTENTS

1. Error Rate Confirmation Procedure

The error rate is displayed on the AUDIO LEVEL METER in Service menu mode.. (When enters in Service men mode, the AUDIO LEVEL METER changes into the error display mode automatically.)

CH1 indicator ON : Video Error Rate display mode.

CH2 indicator ON : Audio Error Rate display mode.

Video and Audio Error Rate display mode can be changed by press Audio Output Select button
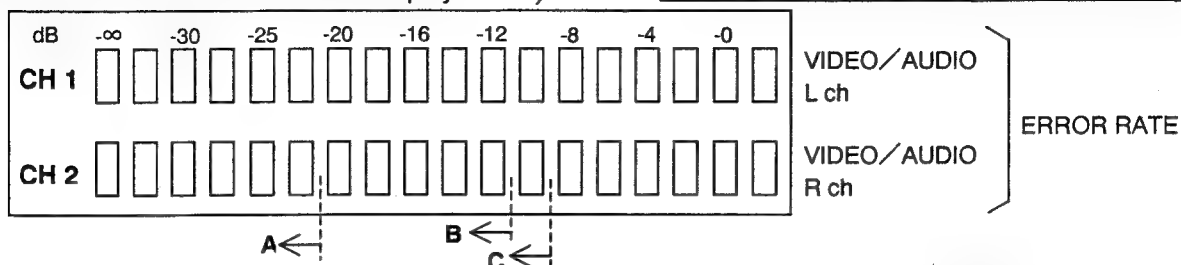
When confirm the error rate, please refer to specification as indicated as below, then please set the some items on Service menu follow the indicated as below table.

≪Specification of Error Rate≫

	Mode	Specification of Error Rate
DVCPRO (PB)	DVCPRO (PB Head) Alignment Tape Playback	Under the "A" position at Level Meter
DVCPRO (RP)	DVCPRO (RP Head) Alignment Tape Playback	Under the "B" position at Level Meter
DV (R/P)	DV (RP Head) Alignment Tape Playback	Under the "C" position at Level Meter

≪Setting of Service Menu≫

MENU	DVCPRO (PB Head Playback)	DVCPRO (RP Head Playback)	DV Playback
B11 : ERROR MODE	FAST	FAST	FAST
B05 : PB HEAD	PB H	RP H	RP H
B03 : VITERBI	ON	ON	ON

2. Service Menu Information

< To transfer from normal mode to Service Menu mode >

(1) Set the bit 2 of DIP SW60902 on the AV SYSCON P.C.Board to ON position.

(2) Set the 「LOCAL / MENU / REMOTE」 select switch on the Front Panel to "MENU" position, then Main menu of Service menu appeared on the screen as indicated as below.

<Main Menu>

```
         SERVICE-MENU
           No. A00

 *  A00 :  SERVO ADJUST
    B00 :  MODE SELECT
    C00 :  REC ADJUST
    D00 :  PB ADJUST
    E00 :  EQ ADJUST
    F00 :  VIDEO ADJUST
    F80 :  TBC ADJUST
    END
```

(3) Move the star mark "＊" by [UP] (FF) or 「DOWN」(STOP) button on the front panel for select the each Sub menu item.

(4) Press the SET button, then open the Sub-menu follow the selected item (A00 to F80) on the Main menu.

(5) For change the value or setting, press the [DATA＋] (PAUSE) or 「DATA－」 (PLAY) button.

(6) Set the 「LOCAL / MENU / REMOTE」 select switch on the Front Panel to "LOCAL" or "REMOTE" position, then escape from Service menu.

The contents of each "Sub menu" which are described on behind page. And the Counter Display is displayed selected number and setting number as indicated as below (Selected Number and Setting Number described on behind page).

$$A01 - 0207$$

Selected Number   Setting number

< Key function for the Service Menu >

『LOCAL/MENU/REMOTE』
1) Set "MENU" position, then move to Service menu mode(it have condition bit 2 of DIP SW60902 on AV SYSCON P.C.Board to ON position)
2) Set "LOCAL" or "REMOTE" position during Service Menu mode, then escape from Service Menu.

『UP』
1) Move the cursor "＊" for select the each items (the cursor move to down direction).
2) Operated FF function originally if press 「END」 + 「UP」 button.

『DOWN』
1) Move the cursor "＊" for select the each items (the cursor move to up direction).
2) Operated STOP function originally if press 「END」 + 「DOWN」 button.

『MOVE』 + 『UP』
1) Move the cursor "＊" to next page (Page up function).

『MOVE』 + 『DOWN』
1) Move the cursor "＊" to behind page (Page down function).

『SET』
1) Move to Sub-menu from Main menu.
2) Operated REC function originally if press 「END」 + 「SET」 button.

『MOVE』 + 『SET』
1) Move to Main menu from Sub-menu.

『DATA＋』
1) Increase the adjustment value or select the selecting item.
2) Operated PAUSE function originally if press 「END」 + 「DATA＋」 button.

『DATA－』
1) Decrease the adjustment value or select the selecting item.
2) Operated PLAY function originally if press 「END」 + 「DATA－」 button.

『BIGIN』
1) Execute the PG Shifter adjustment

『END』
1) Change function of the Key (REW, STOP, FF, PLAY, PAUSE, REC) by press 「END」 +"Operation key" on Service mode.

『AUDIO OUTPUT SELECT』
1) Change the display of Error rate, VIDEO or AUDIO on Audio Level Meter.
2) Select the AUDIO Output signal originally, if press 「END」+「AUDIO OUTPUT SELECT」 button.

Contents of Sub-menu

≪A00: SERVO ADJUST≫

ITEM		SETTING VALUE		CONTENTS OF SETTING AND ADJUSTMENT	REMARK
No.	Name	No.	Display		
A01	T OFFSET	0000 | 0200 | 0255	-128 | 72 | 127	Torque Command Offset Adj. of T REEL	
A02	S OFFSET	0000 | 0200 | 0255	-128 | 72 | 127	Torque Command Offset Adj. of S REEL	
A03	T TORQUE	0000 | 0128 | 0255	-128 | 0 | 127	Correct the offset value of T REEL MOTER DRIVE	
A04	S TORQUE	0000 | 0128 | 0255	-128 | 0 | 127	Correct the offset value of S REEL MOTER DRIVE	
A05	TENSION OFST	0000 | 0213 | 0255	-128 | 85 | 127	Torque Command Offset Adj. of T REEL	
A06	PG SFTR RISE	0000 | 1024 | 4095	0 | 1024 | 4095	(RISE display)　PG SHIFTER AUTO ADJ (FALL display).	
A07	PG SFTR FALL	0000 | 1024 | 4095	0 | 1024 | 4095		

ITEM		SETTING VALUE		CONTENTS OF SETTING AND ADJUSTMENT	REMARK
NO.	Name	No.	Display		
A08	RP GAIN	0000 | **0128** | 0255	-128 | **0** | 127	LISTA SENSITIVITY Adj. (RP HEAD) for DVCPRO	
A09	RP LINEAR			LISTA LINEARITY Adj. (RP HEAD) for DVCPRO	
A10	PB GAIN	0000 | **0128** | 0255	-128 | **0** | 127	LISTA SENSITIVITY Adj. (PB HEAD) for DVCPRO	
A11	PB LINEAR			LISTA LINEARITY Adj. (PB HEAD) for DVCPRO	
A12	DV GAIN	0000 | **0128** | 0255	-128 | **0** | 127	LISTA SENSITIVITY Adj. (RP HEAD) for DV.	
A13	DV LINEAR			LISTA LINEARITY Adj. (RP HEAD) for DV	
A14	MOTOR CHECK	**0000** 0001 0002 0003 0004	**OFF** CAPS. DRUM REEL REEL	Check the motor operation.	
A15	DVCAM ENA	0000 **0001**	OFF **ON**	SELECT THE DVCAM FORMAT CASSETTE	

≪B00: MODE SELECT≫

ITEM		SETTING VALUE		CONTENTS OF SETTING AND ADJUSTMENT	REMARK
No.	Name	No.	Display		
B01	REC DATA SEL	**0000**	**NORMAL**	SELECT THE RECORDING DATA	
		0001	CW		
		0002	CW/4		
B02	ECC	**0000**	**ALL ON**	ERROR CORRECTION INNER ON/OUTER ON	
		0001	INR ON	ERROR CORRECTION INNER ON/OUTER OFF	
		0002	OTR ON	ERROR CORRECTION INNER OFF/OUTER ON	
		0003	AL OFF	ERROR CORRECTION INNER OFF/OUTER OFF	
B03	VITABI	**0000**	**AUTO**	VITABI OPERATION ON/OFF	
		0001	MANUAL		
		0002	OFF		
B04	CONCEAL	**0000**	**ON**	ERROR CONCEALMENT ON	
		0001	OFF	ERROR CONCEALEMENT OFF	
B05	PB HEAD	**0000**	**PB**	FORCED PB HEAD PLAYBACK	
		0001	R/P	FORCED RP HEAD PLAYBACK	
B06	TRACKING	**0000**	**ATF**	SELECTION OF TRACKING CONTROL MODE	
		0001	CTL	* This function is only active on the service Menu mode.	
B07	MANUAL TRACK	0000	-128	" IN CASE OF SELECT THE CTL MODE ON ABOVE	
		|	|	ITEM B06, TRACKING VALUE IS ADJUSTABLE"	
		0128	**0**	* TRACKING VALUE RANGE	
		|	|	DATA 0 - 116 : RELATIVE TO 1 TRACK	
		0255	127	THEREFORE 0 TO 127 IS RELATIVE TO JUST	
				OVER 18 um	
B08	VTB A/2	0000	0	SET VALUE OF A/2	
		|	|	ONLY EFFECTIVE VITABI SET TO MANUAL	
		0031	**31**		
		|	|		
		0063	63		
B09	AD VCO TEST	**0000**	**OFF**	SELECT THE ADJUSTMENT MODE OF SAMPLING	
		0001	32/TST	FREQUENCY OF AUDIO	
		0002	32/NOR		
		0003	44/TST		
		0004	44/NOR		
		0005	48/TST		
		0006	48/NOR		
B10	SHUFFLE EE	0000	ON	SHUFFLE EE MODE ON/OFF	
		0001	**OFF**		
B11	ERROR MODE	**0000**	**FAST**	ERROR DISPLAY MODE "FAST"	
		0001	SLOW	ERROR DISPLAY MODE "SLOW"	
B12	DIF FORM SEL	**0000**	**DIS**	SELECT THE FORMAT OF DIF AUDIO	
		0001	ENA1		
		0002	ENA2		
B13	DIF AUD SEL	**0000**	**DFLT**	SETTING OF RECORDING METHORD OF DIF	
		0001	ZERO	AUDIO	
B14	SLOW AUDIO	**0000**	**OFF**	SELECT THE CONDITION OF AUDIO OUTPUT	
		0001	CUE	SIGNAL ON SLOW PLAYBACK MODE	

≪C00: REC ADJUST≫

ITEM		SETTING VALUE		CONTENTS OF SETTING AND ADJUSTMENT	REMARK
No.	Name	No.	Display		
C01	REC CURR L	0000	-128	SETTING OF REC CURR (RP Lch)	
		0108	-20		
		0255	127		
C02	REC CURR R	0000	-128	SETTING OF REC CURR (RP Rch)	
		0108	-20		
		0255	127		
C03	REC FREQ L	0000	-128	SETTING OF REC FREQ (RP Lch)	
		0108	-20		
		0255	127		
C04	REC FREQ R	0000	-128	SETTING OF REC FREQ (RP Rch)	
		0108	-20		
		0255	127		
C05	DEFAULT	0000	END		
		0001	LOAD		
		0002	SAVE		

「 Operation of DEFAULT 」

1. Set the cursor " ＊ " to SAVE or LOAD and press the SET button, then execute the program.

NOTE: 1. The VTR have two memory area for the adjustment value as indicated as below.

MEM1

MEM2
(FACTORY) ←——— SAVE
——→ LOAD

MEM 2 have factory adjustment value.
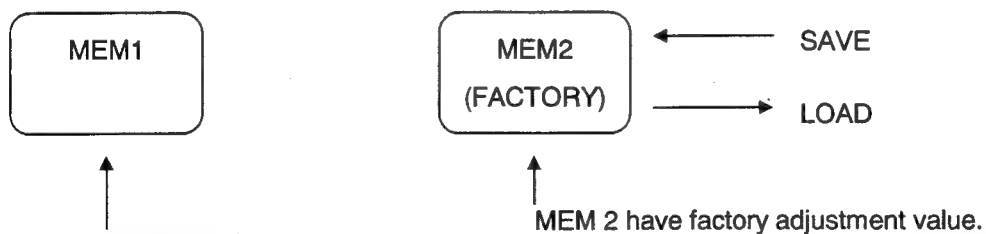
MEM1 is always renewed follow the adjustment value on the RF and EQ adjustment menu.

2. We recommended the SAVE function does not use on the market, because the renewed adjustment value is stored to MEM 1 automatically.

≪D00: PB ADJUST≫

ITEM		SETTING VALUE		CONTENTS OF SETTING AND ADJUSTMENT	REMARK
No.	Name	No.	Display		
D01	RP PHASE L	0000 | **0055** | 0255	-128 | **-73** | 127	RP Lch PLAYBACK PHASE CORRECTION	
D02	RP MAG L	0000 | **0108** | 0255	-128 | **-20** | 127	RP Lch PLAYBACK OUTPUT GAIN CORRECTION	
D03	RP A L	0000 | **0160** | 0255	-128 | **42** | 127	RP Lch PLAYBACK OUTPUT DELAY A CORRECTION	
D04	RP B L	0000 | **0100** | 0255	-128 | **-28** | 127	RP Lch PLAYBACK OUTPUT DELAY B CORRECTION	
D05	RP PHASE R	0000 | **0055** | 0255	-128 | **-73** | 127	RP Rch PLAYBACK PHASE CORRECTION	
D06	RP MAG R	0000 | **0108** | 0255	-128 | **-20** | 127	RP Rch PLAYBACK OUTPUT GAIN CORRECTION	
D07	RP A R	0000 | **0160** | 0255	-128 | **42** | 127	RP Rch PLAYBACK OUTPUT DELAY A CORRECTION	
D08	RP B R	0000 | **0100** | 0255	-128 | **-28** | 127	RP Rch PLAYBACK OUTPUT DELAY B CORRECTION	
D11	PB PHASE L	0000 | **0055** | 0255	-128 | **-73** | 127	PB Lch PLAYBACK PHASE CORRECTION	
D12	PB MAG L	0000 | **0108** | 0255	-128 | **-20** | 127	PB Lch PLAYBACK OUTPUT GAIN CORRECTION	

ITEM		SETTING VALUE		CONTENTS OF SETTING AND ADJUSTMENT	REMARK
No.	Name	No.	Display		
D13	PB A L	0000 | **0160** | 0255	-128 | **42** | 127	PB Lch PLAYBACK OUTPUT DELAY A CORRECTION	
D14	PB B L	0000 | **0100** | 0255	-128 | **-28** | 127	PB Lch PLAYBACK OUTPUT DELAY B CORRECTION	
D15	PB PHASE R	0000 | **0055** | 0255	-128 | **-73** | 127	PB Rch PLAYBACK PHASE CORRECTION	
D16	PB MAG R	0000 | **0108** | 0255	-128 | **-20** | 127	PB Rch PLAYBACK OUTPUT GAIN CORRECTION	
D17	PB A R	0000 | **0160** | 0255	-128 | **42** | 127	PB Rch PLAYBACK OUTPUT DELAY A CORRECTION	
D18	PB B R	0000 | **0100** | 0255	-128 | **-28** | 127	PB Rch PLAYBACK OUTPUT DELAY B CORRECTION	
D21	DV PHASE L	0000 | **0090** | 0255	-128 | **-38** | 127	RP Lch PLAYBACK PHASE CORRECTION (FOR DV)	
D22	DV MAG L	0000 | **0200** | 0255	-128 | **72** | 127	RP Lch PLAYBACK OUTPUT GAIN CORRECTION (FOR DV)	
D23	DV A L	0000 | **0140** | 0255	-128 | **12** | 127	RP Lch PLAYBACK OUTPUT DELAY A CORRECTION (FOR DV)	
D24	DV B L	0000 | **0100** | 0255	-128 | **-28** | 127	RP Lch PLAYBACK OUTPUT DELAY B CORRECTION (FOR DV)	
D25	DV PHASE R	0000 | **0090** | 0255	-128 | **-38** | 127	RP Rch PLAYBACK PHASE CORRECTION (FOR DV)	

ITEM		SETTING VALUE		CONTENTS OF SETTING AND ADJUSTMENT	REMARK
No.	Name	No.	Display		
D26	DV MAG R	0000 | **0200** | 0255	-128 | **72** | 127	RP Rch PLAYBACK OUTPUT GAIN CORRECTION (FOR DV)	
D27	DV A R	0000 | **0140** | 0255	-128 | **12** | 127	RP Rch PLAYBACK OUTPUT DELAY A CORRECTION (FOR DV)	
D28	DV B R	0000 | **0100** | 0255	-128 | **-28** | 127	RB Rch PLAYBACK OUTPUT DELAY B CORRECTION (FOR DV)	
D30	DEFAULT	0000 0001 0002	END LOAD SAVE	 LOAD THE FACTORY ADJUSTMENT VALUE SAVE THE ADJUSTMENT VALUE	

≪E00: EQ ADJUST≫

ITEM		SETTING VALUE		CONTENTS OF SETTING AND ADJUSTMENT	REMARK
No.	Name	No.	Display		
E01	AUTEQ TARGET	0000 | **0170** | 0255	-128 | **42** | 127	QUANTITY OF EQUIVALLENT FOR EQ IC ADJ.	
E02	DELAY OFFSET	0000 | **0100** | 0255	-128 | **-28** | 127	EQ DELAY OFFSET ADJ.	
E03	COMP LEVEL	0000 | **0120** | 0255	-128 | **-8** | 127	EQ COMPALATOR LEVEL ADJ.	
E04	CLOCK PHASE	0000 | **0160** | 0255	-128 | **32** | 127	PLL CLOCK PHASE ADJ.	
E05	DEFAULT	0000 0001 0002	END LOAD SAVE	 LOAD THE FACTORY ADJUSTMENT VALUE SAVE THE ADJUSTMENT VALUE	

≪F00: VIDEO ADJUST≫

ITEM		SETTING VALUE		CONTENTS OF SETTING AND ADJUSTMENT	REMARK
No.	Name	No.	Display		
F01	Y/C AXIS OFS	0000 | 0128 | 0255	-128 | 0 | 127	SETTING THE OFFSET OF Y/C REC CHROMA PHASE.	
F02	CPS AXIS OFS	0000 | 0128 | 0255	-128 | 0 | 127	SETTING THE OFFSET OF COMPOSITE REC CHROMA PHASE.	
F03	CPS Y LEV	0000 | 0128 | 0255	-128 | 0 | 127	SETTING OF RECORDING Y LEVEL	
F04	CPS C LEV	0000 | 0128 | 0255	-128 | 0 | 127	SETTING OF RECORDING CHROMA LEVEL	
F05	Y CLAMP DC	0000 | 0128 | 0255	-128 | 0 | 127	SETTING VOLTAGE OF RECORDING Y CLAMP	
F06	REC PR BAL	0000 | 0128 | 0255	-128 | 0 | 127	SETTING OF REC PR LEVEL	
F07	REC PB BAL	0000 | 0128 | 0255	-128 | 0 | 127	SETTING OF REC Pb LEVEL	
F08	PR BAL	0000 | 0128 | 0255	-128 | 0 | 127	SETTING OF PR OUTPUT BALANCE	
F09	PB BAL	0000 | 0128 | 0255	-128 | 0 | 127	SETTING OF Pb OUTPUT BALANCE	
F10	SET UP OFST	0000 | 0128 | 0255	-128 | 0 | 127	SETING OF SET UP LEVEL	

ITEM		SETTING VALUE		CONTENTS OF SETTING AND ADJUSTMENT	REMARK
No.	Name	No.	Display		
F11	V LEV OFST	0000 | 0128 | 0255	-128 | 0 | 127	SETTING OF VIDEO OUTPUT LEVEL	
F12	HUE OFST	0000 | 0128 | 0255	-128 | 0 | 127	SETTING HUE OFFSET BALUE OF VIDEO OUTPUT	
F13	C LEV OFST	0000 | 0128 | 0255	-128 | 0 | 127	SETTING OF PLAYBACK CHROMA LEVEL	
F14	SET UP ADD	0000 | 0072 | 0255	-128 | -56 | 127	SET THE SET UP LEVEL on SET UP ADD condition	
F15	V LEV ADD	0000 | 0026 | 0255	-128 | -102 | 127	SET THE VIDEO LEVEL on SET UP ADD condition	
F16	Y CLAMP CUT	0000 | 0119 | 0255	-128 | -9 | 127	SET THE LEVEL on SET UP CUT condition	
F17	EE CLAMP DC	0000 | 0208 | 0255	-128 | 80 | 127	SETTING OF CLAMP DC ON EE MODE	
F18	VV CLAMP DC	0000 | 0216 | 0255	-128 | 88 | 127	SETTING OF CLAMP DC ON VV MODE	
F19	V SETUP	0000 0001	OFF ON	Select the display V IN SET UP and V OUT SET UP on the SET UP menu	
F30	DEFAULT	0000 0001 0002	END SAVE LOAD	LOAD THE FACTORY ADJUSTMENT VALUE SAVE THE ADJUSTMENT VALUE	

≪F80: TBC ADJUST≫

ITEM		SETTING VALUE		CONTENTS OF SETTING and ADJUSTMENT	Remark
No.	Name	No.	Display		
F81	V LEV ENA	0000	OFF	VALID / INVALID SELECTION OF VIDEO LEVEL	
		0001	ON	FOR SET UP MENU "05 : VIDEO LEVEL"	
F82	STUP LEV ENA	0000	OFF	VALID / INVALID SELECTION OF SET UP LEVEL	
		0001	ON	FOR SET UP MENU "06 : SET UP LEVEL"	
F83	HUE ENA	0000	OFF	VALID / INVALID SELECTION OF HUE FOR SET	
		0001	ON	UP MENU "07 : HUE"	
F84	C LEV ENA	0000	OFF	VALID / INVALID SELECTION OF CHROMA LEVEL	
		0001	ON	FOR SET UP MENU " 08 : CHROMA LEVEL "	
F85	VIDEO PHASE	0000	-128	SETTING OF VIDEO PHASE	
		│	│		
		0128	0		
		│	│		
		0255	127		
F86	DEFAULT	0000	END		
		0001	LOAD	LOAD THE FACTORY ADJUSTMENT VALUE	
		0002	SAVE	SAVE THE ADJUSTMENT VALUE	

3. DIAG MENU OPERATION
(Display procedure of Hour Meter and Software Version)

- Display the Software version
- Display the Hour Meter

The units system software version display and hour meter displays can be viewed on the DIAG menu.

<To transfer from a Normal mode to the DIAG mode>

(1). Keep pressing EJECT button, set the 「 LOCAL／MENU／REMOTE 」 switch to "MENU" position on the front panel, then Hour Meter information appear on screen.

(2). For select the item on Hour Meter display, press UP(FF) button to move down the cursor(＊) and press DOWN(REW) button to move up the cursor(＊).

《Hour Meter Display》

```
DIAG-MENU HOUR METER

 ＊ H0    OPERATION        10000H
    H1    DRUM RUN         10000H
    H2    TAPE RUN         10000H
    H3    THREADING        10000T
```

《Version Display》

```
DIAG-MENU-VERSION
<NTSC>
    IF              1.00-00-0.00
    AV-SYSCON       1.00-00-0.00
    SBC             1.00-00-0.00
    CYLINDER        1.00-00-0.00
    REEL            1.00-00-0.00
    END
```

Counter Display also displayed item number and hour of Hour Meter information as indicated as below

(e.g.)   H0 00001

Software version number of FRONT displayed on the Counter display as indicated as below.

(e.g.)   2.00－006

<To display the software version>

(1). Press 「MODE」+「UP」 or 「MODE」+「DOWN」 button.
The display changes to version from hour meter.

[Display Mode]
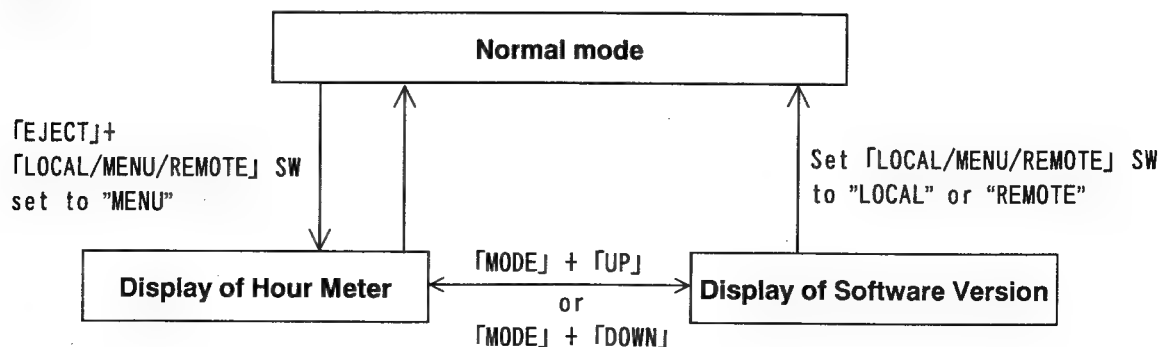
4. HOW TO RESET THE HOUR METER

1. Make an Eject condition.
2. Set the bit 2 of DIP SW 60902 on AV SYSCON P.C.Board to ON position.
3. Display the Hour Meter information on screen.
4. Set cursor "✱" to required item for reset (item H1 to H3).
   NOTE: The Hour Meter can reset individually, which are DRUM RUN, TAPE RUN and THREADING.
5. Press the reset button, then appeared message as indicated as below.

< In case of select H1:DRUM RUN >

```
HOUR NETER INIT SET

DRUM RUN      OK?


YES <STOP> / NO <STILL>
```

※ When press the "STOP" button, then execute the reset function.
   When press the "STILL" button, then cancel the reset command.

Details of the hour meter display are given below.

Item		Data	Description
No.	**Display**	**Display**	
H0	OPERATION	00000H ⋮ 99999H	The period of time during which the power has been supplied since it was turned on is displayed in 1-hour increments.
H1	DRUM RUN	00000H ⋮ 99999H	The period of time during which the drum has been rotation is displayed in 1-hour increments.
H2	TAPE RUN	00000H ⋮ 99999H	The tape travel duration in the fast forward, rewind, play, search (JOG, VAR, SHTL), recording or editing mode (but not in the STILL mode with JOG, VAR and SHTL) is displayed in 1-hour increments.
H3	THREADING	00000H ⋮ 99999H	The number of times the tape has been threaded or unthreaded is didplayed in 1-time increments.

5. FLASH ROM VERSION UP PROCEDURE

1. FLASH ROM VERSION UP REQUIREMENT.
    * Flash rom version up software (VFK1248A)
    * Rom Rewriter (VFK1304A)
    * WINDOWS Ver. 3.1 or WINDOWS 95 built in personal computer
    * RS-232C cable (cross)
    Note : · The VFK1304A is desighed cross type specification of 9P RS232C cables.
    　　　　· If you want to use the RS232C straight cables, please remove the resistor R3 and R4. And those
    　　　　· resistors are install to pattern of R1 and R2.

2. INSTALL THE FLASH ROM VERSION UP SOFTWARE
    * Copy the following files to WINDOWS Ver. 3.1 or WINDOWS 95 built in personal computer.
        VSI2312A.EXE　　(PROGRAM FILE)
        VSI2312A.INI　　 (INITIAL FILE)

3. LOADING METHOD OF FLASH ROM VERSION UP SOFTWARE
    1)　When using the WINDOWS Ver. 3.1 built in personal computer.
        * Load the file manager and double click the VSI2312A.EXE file.
        * Resistor the VSI2312A.EXE file to icon and double click it.
    2)　When using the WINDOWS 95 built in personal computer.
        * Load the explorer and double click the VSI2312A.EXE file.
        * Make the short cut of VSI2312A.EXE file and double click it.

4. CONNECTION OF ROM REWRITER.
    Please connect the Rom Rewriter after turn off the power switch on AJ-D250.

> **Caution**
>
> -- Additional Preparation --
>
> Please disconnect the flexible cable of the P1101 connector on the AV SYSCON C.B.A..
>
> Also, be careful about disconnected flexible cable does not touch to the Print Circuit boards or Chassis of the unit.

Connect the RS-232C Cable between VFK1304A and serial port of Personal Computer

VFK1304A

＊VWJ20E5500L00

Connect the flexible cable between VFK1304A and P60802 on AV SYSCON Board.
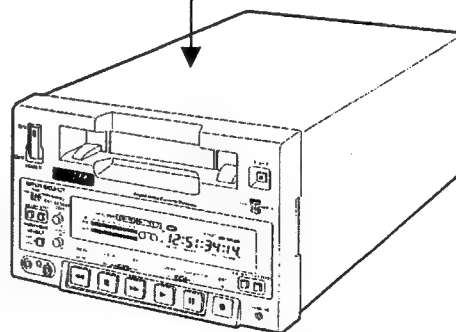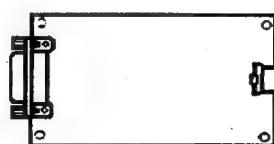
＊**NOTE :** The flexible cable (Part No.VWJ20E5500L00) included VFK1304A. But it can be ordered for spare parts.

5. FLASH ROM VERSION UP PROCEDURE

(1) Connect the Rom Writer (VFK1304A) to D250 and personal computer after turn off the power switch on AJ-D250

(2) Set the pin 1 and 2 of Dip Switch on the P.C.Board (VFK1304A) to ON position.

(3) Load the flash rom version up software. Then the following window is opened.

```
┌──────────────────────── Setup Panel ────────────────────────┐
│                                                              │
│ TARGET MACHINE ID CHECK  ○ Off  ◉ On  │K2            │ ┌────┐│
│                                                        │FLASH││
│                                                        │ ROM ││
│ TARGET FILE NAME │A:¥ K2 .MOT                    │     │SETUP││
│                                                        └────┘│
│ ┌Port──┐ ┌Baud Rate┐ ┌Stop Bits┐ ┌Byte Size┐ ┌Parity┐ ┌Main Panel┐│
│ │COM1 ▼│ │56000  ▼ │ │1Bit   ▼ │ │8Bits  ▼ │ │NONE ▼│ │☐ Full size││
│ └──────┘ └─────────┘ └─────────┘ └─────────┘ └──────┘ └──────────┘│
│ │  Ok  │ │Browse...│ │ Default │ │Exit(End)│ │Cansel│ │ Version  ││
│                                                              │
│ This program is │C:¥ROM_SOFT¥VSI2312A.EXE                   ││
└──────────────────────────────────────────────────────────────┘
```

(4) Set the following setting on the Set Up Panel. Please type capital letter.
- TARGET MACHINE ID CHECK   --->   On, K2
- TARGET FILE NAME   --->   Set the new software file name with full pass or click the Browse button and select the new file. (When click the Browse button, the following window is opened.)
- Port· --->   Set the personal computer COM port No.
- Baud Rate   --->   Baud Rate can be set 56000 and 19200 only. In case of set to 19200, set the pin 2 of Dip-Switch to OFF position on the P.C.Board (VFK1304A).

```
┌──────────────────── Select target file ────────────────────┐
│                                                             │
│ File name (N) :        Directories (D) :      ┌────────┐    │
│ ┌──────────────────┐   a:¥                    │   OK   │    │
│ │a:¥ K2 .mot│      │                          └────────┘    │
│ └──────────────────┘                          ┌────────┐    │
│ ┌──────────────┐      ┌──────────────┐        │ Cancel │    │
│ │K2 .mot      ▓│      │📂 a:¥        ▓│        └────────┘    │
│ │              │      │              │                      │
│ │              │      │              │                      │
│ │              │      │              │        ☐ Overwrite (R) :│
│ │              │      │              │                      │
│ │             ▓│      │             ▓│                      │
│ └──────────────┘      └──────────────┘                      │
│ Files    (T) :        Drive   (V)                           │
│ │Hex Files (*.mot) ▼│ │💾 a:          ▼│                     │
└─────────────────────────────────────────────────────────────┘
```

(5) Set the Main Panel setting and then click the OK button. Main Panel is opened.
   • Main Panel ---> When select the full size of Main Panel, the following window is opened. Full size Main
                     Panel can indicate the detail information of machine status.
However it takes more time to complete the version up at the full size main Panel in

```
┌─────────────────────────── Main Panel 0% ──────────────────────── ▼ ┐
│                                                                        │
│  TARGET MACHINE ID CHECK   ○ OFF   ◉ ON   │K2                      │  │
│                                                                        │
│  TARGET FILE NAME    │A:¥ K2.MOT                                  │   │
│                                                                        │
│  □ Display read file data (File -> PC)      ┌─Infomation──────────┐   │
│                                             │COM1        │ │56000  │  │
│  □ Display sent data (PC -> Target machine) │                      │  │
│                                             │1Bit    │ │8Bit │ │NONE│ │
│  □ Display received data (Target machine -> PC) └───────────────────┘ │
│  ┌─Information────────────────────────────┐  ┌──────────────────┐    │
│  │ ◉ Waiting to start   ○ Reading file and verifying│   Start    │   │
│  │                                         │  └──────────────────┘    │
│  │ ○ Inquiring type of machine  ○ Sending  │  ┌──────────────────┐    │
│  │                                         │  │ Emergency stop   │    │
│  │ ○ Erasing machine ROM  ○ Waiting to receive data └──────────────┘  │
│  │                       ○ Checking received data │ Quit │ Exit(End) │ │
│  └────────────────────────────────────────┘                          │
│  0%                      50%                              100%         │
│  ┌──────────────────────────────────────────────────────────────┐    │
│  └──────────────────────────────────────────────────────────────┘    │
│  This program is│C:¥ROM_SOFT¥VSI2312A.EXE                         │   │
└────────────────────────────────────────────────────────────────────┘
```

   • Main Panel ---> When select the small size of Main Panel, the following window is opened.

```
┌─────────── Main Panel 0% ────────── ▼ ┐
│  ┌─────┐ ┌──────┐ ┌──────────┐ ┌─────┐ │
│  │COM1 │ │Start │ │ Exit(End)│ │Quit │ │
│  └─────┘ └──────┘ └──────────┘ └─────┘ │
│  ┌──────────────────────────────────┐  │
│  │        Emergency stop            │  │
│  └──────────────────────────────────┘  │
└────────────────────────────────────────┘
```

We recommend the Main Panel setting to full size.

(6) Turn on the power switch on AJ-D250. And confirm that the LCD is displayed abnormal. (It only occurred version up side of VTR.)

(7) If the LCD is displayed normally, if occurred connection error.
Please confirm the connection between AJ-D250, rom rewriter and personal computer after turn off the power switch on AJ-D250.

(8) Click the OK button on the Main Panel. Rewrite the new software to flash rom after erase the flash rom. When you selected the full size Main Panel, you can confirm the detail information of machine status. When you selected the small size Main Panel, you can confirm the machine status (percentage) at title bar.

Note: · It takes about 1 minute to erase flash memory.

(9) In case of no erasing or no writing when "Inquiring type of machine" on the full size Main Panel, check the RS-232C communication or TARGET MACHINE TYPE.

(10) After finish the version up, please confirm the display of AV STS software version on the LCD. Turn the power switch to off and disconnect the Rom rewriter (VFK1304A) from the D250.

6. ERROR MESSAGES
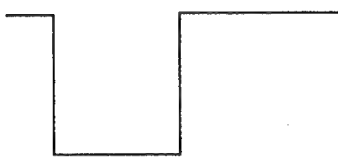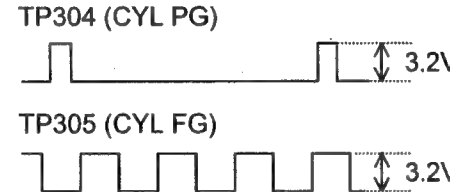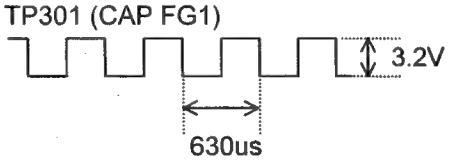
When one of the error numbers appears on the counter display, the VTR is set to the auto OFF mode (stop).

NOTE: Error number E-00, E-01 and E-09, which are indicated as warning condition to VTR. VTR operation is continued.

Error No.	Details of Error	VTR Operation
E-00	Appears when the servo fails to lock 3or more seconds. When T&S&R is selected as the SETUP menu item No.001 setting, "SERVO NOT LOCKED" is display on the third line (line where the remaining tape amount is indicated) of the monitor screen.	CONTINUATION
E-01	Appears when there is no head output for one or more seconds (due to clogging, etc.). "L" is displayed on the first line (counter line) of the monitor screen. When T&S&R is selected as the SETUP menu item No.001 setting, "LOW RF" is display on the third line (line where the remaining tape amount is indicated) of the monitor screen.	CONTINUATION
E-09	Appears when there is no head output for one or more seconds (due to clogging, etc.). "N" is displayed on the first line (counter line) of the monitor screen. When T&S&R is selected as the SETUP menu item No.001 setting, "NO RF" is display on the third line (line where the remaining tape amount is indicated) of the monitor screen. When all the following conditions are met, the part of the tape is recognized as a blank. ● No output from any of the heads ● Playback data can not be read ● NO CTL signal	CONTINUATION
E-11	The reel base, which operates in line with the size of the tape has been locked up for 2.5 or more seconds.	STOP
E-21	Four or more 4 seconds have elapsed after the cassette was instead but the cassette is not lowered down inside the unit. Alternatively, 4 or more seconds have elapsed after the eject operation was initiated but the cassette is not ejected.	STOP
E-31	The loading operation is not completed within 4 seconds.	STOP
E-32	The unloading operation is not completed within 4 seconds.	STOP
E-41	The FG (rotational speed) signal is not output from the cylinder motor.	STOP
E-42	The PG (phase speed) signal is not output from the cylinder motor.	STOP
E-43	The cylinder motor speed is abnormally high.	STOP
E-44	The cylinder motor speed is abnormally low.	STOP

Error No.	Details of Error	VTR Operation
E-51	The FG (rotational speed) signal is not output from the capstan motor.	STOP
E-52	The capstan motor speed is abnormally high.	STOP
E-53	The capstan motor speed is abnormally low.	STOP
E-61	The supply reel motor has locked up.	STOP
E-62	The take-up reel motor has locked up.	STOP
E-63	The supply reel motor speed is abnormally high.	STOP
E-64	The take-up reel motor speed is abnormally high.	STOP
E-65	Abnormal tension has been detected.	STOP
E-66	At the tape start or end, the short FF or, REW operation does not stop even after 7 or more seconds.	STOP
E-67	A check sum error was detected in the serial data communication between the AV SYSCON and SERVO.	STOP
E-68	In serial data communication between the AV SYSCON and SERVO, the data was fixed at low or high and the absence of data was detected.	STOP
E-69	A communication error was detected in the serial data between the AV SYSCON and SERVO, when the power was turned on.	STOP
E-6B	This appears when there is a communication error between IF and AV SYSCON. There is a problem with the internal reference or external reference.	STOP
E-70	The fan motor has stopped "S" is displayed on the first line (counter line) of the monitor screen. When T&S&R is selected as the SETUP menu item No.001 setting, "FAN STOP" is display on the third line (line where the remaining tape amount is indicated) of the monitor screen. When about an hour elapses, the unit is shut down automatically.	STOP ↓ Forced POWER OFF
E-72	Trouble in the solenoid drive circuitry was detected.	STOP
E-73	Trouble in the cleaning solenoid drive circuitry was detected.	STOP

7. AUTO OFF Check Point Table (Part of SERVO)

Error Number	Check Point	
E-43	TP304 (CYL PG) 3.2V TP305 (CYL FG) 3.2V	Check Cylinder PG at pin 66 of IC2201 (TP304) Check Cylinder FG at pin 67 of IC2201 (TP305) [In case of fast rotation] ● Check Cylinder flexible cable, connectors. ● Check CYL_ERR (TP204) voltage. Normal Rotation : TP204 = about 1.6 V During Full Acceleration : TP204 = 0 V EJECT mode : TP204 = 3.2 V V REF (IC2506-47 pin) = about 1.6 V fix If above voltage is incorrect, servo board is not correct. [In case of FG is correct and PG is incorrect] PG signal flow is incorrect. (Cylinder >> SERVO >> Servo)
E-52	TP301 (CAP FG1) 3.2V 630us	Check Capstan FG at TP301. ● Check acceleration command. Confirm the V REF (IC2503 - 47 pin) is about 1.6 V. Confirm the CAP_ERR (TP2203) voltage is about 1.0 V at STOP condition. →If it is incorrect, command signal flow is incorrect. ● Check the FG signal does not have noise. Check CAP_FG1,2 (TP301, 302) frequency is correspond with rotary speed. (about 1.58 kHz in REC/PB mode) → If it is incorrect, FG signal flow is incorrect.

| E-44 | Check that the tape is stick with the Cylinder.
Check that the tape is stick with a part of the tape pass and it causes the high tension. In this case tape may brake the Cylinder rotation.
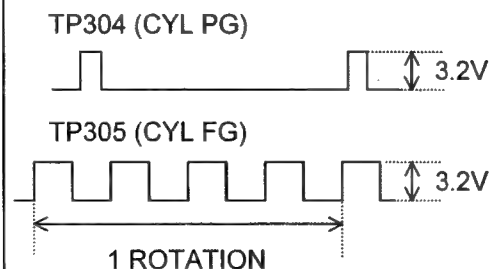
TP304 (CYL PG)

⟂ 3.2V

TP305 (CYL FG)

⟂ 3.2V

←――― 1 ROTATION ―――→ | Check Cylinder PG at pin 66 of IC2201 (TP304)
Check Cylinder FG at pin 67 of IC2201 (TP305)
[In case of FG is correct and PG is incorrect]
PG signal flow is incorrect. (Cylinder >> Servo)
[In case of both PG and FG are incorrect (Cylinder rotation is actually slow.)]
(1) Check Cylinder Unit.
Rotate the Cylinder in EJECT or UNLOAD condition. Check that the Cylinder smoothly rotate. If it is not smooth, the Cylinder unit is incorrect.
(2) Check the rotary speed detection.
Check that the CYL_FG_ (TP305) shows the pulse which is 4 pulses per rotation and the duty is 50 %, 0V/3.2V.
If it is incorrect, FG signal flow is incorrect.
(3) Check the Servo CPU outputs acceleration command.
● Check that acceleration voltage (less than 1.6 V) is output at CYL_ERR (TP204).
● Check that drive on signal which is 3.2 V at IC2506-49 pin. when it is 1.6 V, it is OFF mode.
(4) Check the Reference voltage.
Check that V REF (IC2506-47 pin) voltage is about 1.6 V.
→ If (3) or (4) is incorrect, surround circuit of CPU is incorrect.
(5) Check that Power Supply voltage.
Check that Drive IC voltage (VCC 3.2V : IC2506-54 pin) and Motor Drive voltage CYL_VM (IC2506-33 pin).
The VM is positive voltage during Cylinder ON.
→ If it is correct, between Motor Drive and Cylinder is incorrect.
    Check connectors of Cylinder and Servo. |

E-53	Check the tape is not stacked with the tape pass and tension is not high. Check the mechanical load of Capstan.	Check Capstan FG at TP301. ● In case of the Capstan Motor overrunning even the message is too slow. The FG signal which is used to detect capstan speed is not supplied to the SERVO CPU. Check the frequency at CAP_FG1,2 (TP301, 302) is correspond with the rotary speed. (about 1.58 kHz, 0/3.2 V in REC/PB mode). Check the connectors of Capstan and Servo. ● In case of Capstan does not rotate. (1) Check the Servo CPU supplies the acceleration command. Check the V REF (IC2503 - 47 pin) is about 1.6V. Check the CAP_ERR (TP2203) is acceleration command. It is below than V REF voltage. If the capstan does not rotate, the CAP_ERR voltage should be 0 V. Check Drive ON signal (IC2503-49 pin) is 3.2V (rev) and 0V (fwd), 1.6 V (OFF). (2) Check the Power Supply voltage. Check the Drive IC power voltage (VCC 3.2V : IC2503 - 54 pin). Check Motor Drive voltage CAP_VM (IC2503 - 33 pin). (3) Check the Drive signal is supplied to Capstan motor. Check the connectors of Capstan and Servo. If above conditions are correct, motor or drive circuit is incorrect. (4) Check the TSR (IC2201 - 93 pin) and FRP (IC2201 - 84 pin) signals are inputted to CPU.
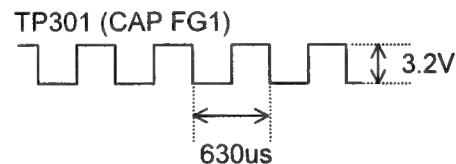
TP301 (CAP FG1)

3.2V

630us

| E-63 | | 1. Check Reel FG waveform.
Reel FG --- Refer to Reel FG Check 1 and Reel FG Check 2
Check the below signals input to Reel CPU
● S-Reel-FG (IC2101-1 & 8 pin)
● T-Reel-FG (IC2101-9 & 68 pin)
● S-Reel-FWD-L (IC2101-11 pin)
● T-Reel-FWD-L (IC2101-12 pin)
[In case of abnormal condition]
● Check loosen of connector
Servo board
● Reel FG Sensor, Reel Replacement
2. Check Reel Drive circuit.
TP2403 (S REEL ERR) and TP2543 (T REEL ERR) on
SERVO board --- less than 0.5 V |
| E-64 | | 1. Check Reel FG waveform.
Reel FG --- Refer to Reel FG Check 1 and Reel FG Check 2
Check the below signals input to Reel CPU
● S-Reel-FG (IC2101-1 & 8 pin)
● T-Reel-FG (IC2101-9 & 68 pin)
● S-Reel-FWD-L (IC2101-11 pin)
● T-Reel-FWD-L (IC2101-12 pin)
[In case of abnormal condition]
● Check loosen of connector
Servo board
● Reel FG Sensor, Reel Replacement
2. Check Reel Drive circuit.
TP2403 (S REEL ERR) and TP2543 (T REEL ERR) on
SERVO board --- less than 0.5 V |

E-61 E-62		1. Confirm the Reel offset adjustment. 2. Confirm the Reel Torque adjustment. 3. Confirm the Tension. 4. Check the Capstan is operated correctly (CAP mode). 5. Check the tape is beat 6. Check loosen of connector. 7. Check the Reel-Brake Solenoid are operated correctly.
E-66	Check the problem occurred at tape beginning or tape, or other portion. DC 1.7V ⎓ 1.0Vp-p ● FG1 (IC2901 - 1 & 7 pin) ● FG2 (IC2904 - 1 & 7 pin)	1. Check Reel FG Reel FG --- Refer to Reel FG Check 1 and Reel FG Check 2 [In case of abnormal condition] ● Check loosen of connector Servo board ● Reel FG Sensor, Reel Replacement 2. Check transparent tape detection. [In case of abnormal condition] ● Check loosen of connector Servo board ● Replace sensors. 3. Check the tape is not bent.

Fig 1 REEL Position Detect		Rotate the REEL motor in EJECT mode and check the following waveform. Servo board P2035 - 16 TH1+
		14 TH1-
		12 TH2+
		10 TH2-
		8 TH3+
		6 TH3-
		P2034 - 16 SH1+
		14 SH1-
		12 SH2-
		10 SH3+
		8 SH3+
		6 SH3-
Fig. 2 REEL Drive Waveform		Select T or S_REEL_TRQ on the MENU, and rotate the REEL and confirm the following waveform is like Fig. 2. Servo board P2035 - 13 TM3
		9 TM1
		19 TM1
		13 SM3
		9 SM1
		17 SM2
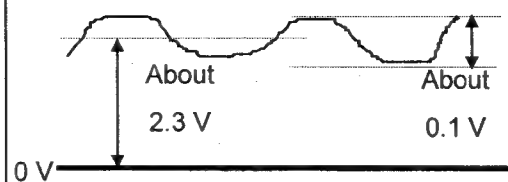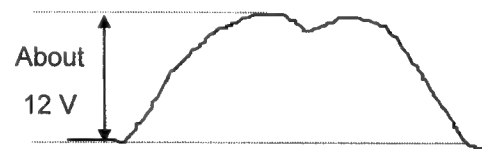
SECTION 3

MAINTENANCE/DISASSEMBLY PROCEDURES & MECHANICAL ADJUSTMENT

CONTENTS

1. Maintenance

1-1.Maintenance Part Chart

No	Name	Part Number	Part Using Hours (Unit hours)					
			2,000	4,000	6,000	8,000	10,000	12,000
	Tape Path Cleaning		△Clean the Tape Path at each 500 hours					
1	Cylinder Unit	VEG1498	●	●	●	●	●	◎
2	Cleaning Arm Unit	VXL2924	●	●	●	●	●	◎
3	Pinch Arm Unit	VXL2835		●■		●■		◎
4	S Reel Motor Unit	VEM0686			●			◎
5	T Reel Motor Unit	VEM0687			●			◎
6	Thrust Screw Unit	VXQ0556			●▲			◎
7	Front Loading Unit	VXA6753						●
8	Mech. Chassis Unit	VXY1459Z1						●
9	Fan Motor	VRF0202	Replace the Fan Motor at each 10,000 hours *Operation Time*					

Note: Using hours are based on the head rotation hours.

Using hours are recommendation. It may depended on temperature, humidity or dusty.

Using hours are listed as the reference of maintenance. They do not mean guarantee Hours.
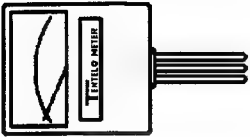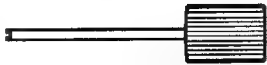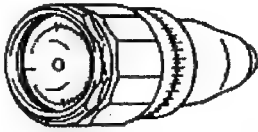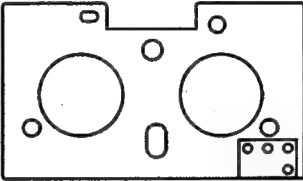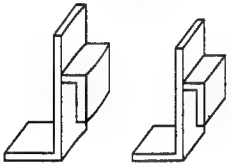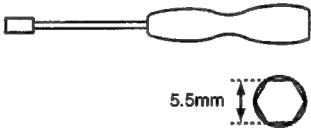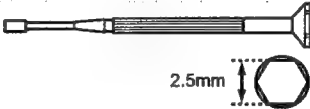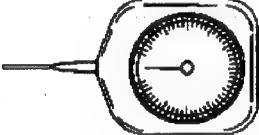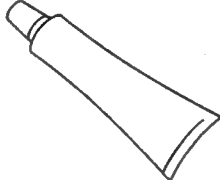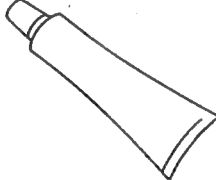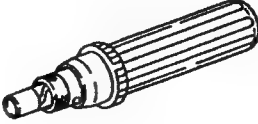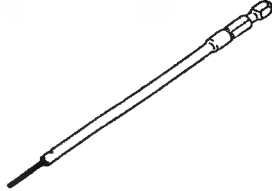
Symbol	Maintenance	Remark
●	Replacement	
◎	Replacement	These parts are included in Mech Chassis Unit
■	Greasing	Wipe the old grease and apply new grease
△	Cleaning	This mark means cleaning is necessary
▲	Lubrication	The lubrication is necessary

1-2. Sensors Layout

① Cylinder Unit

② Cleaning Arm Unit

Loading Motor 1 Unit

Cleaner Solenoid.

A/C Head

Mode SW Unit

T1 Boat Unit A

Main Cam Gear

DEW Sensor

Pinch Solenoid

S5 Post Base A Unit

M stopper Solenoid

S1 Loading Arm A Unit

⑥ Trust Screw Unit

Tension Arm N Unit

③ Pinch Arm Unit

Tape End Sensor

Tape Beginning Sensor

Supply up Reel Brake Sol.

Supply Reel Brake Solenoid

④ S Reel Motor Unit

Tape Det. LED

S Reel FG Sensor

T Reel FG Sensor

⑤ T Reel Motor Unit

REC Inhibit SW

Reel Drive Motor Unit

Distinction SW Unit

Reel Position Sensor (Pos 1 & 2)

Slide Rod Unit

1-3. SERVICING FIXTURES & TOOLS

FIG.	PART NUMBER	FIXTURES & TOOLS	REMARKS
1	VFK1145	Back Tension Meter	
2	VFK1149	Post Driver	
3	VFK71	Dial Torque Gauge (150g)	
4	VFK1191	Dial Torque Gauge (45g)	
5	VFK1152	Torque Gauge Adapter	
6	VFK0357	Eccentric Driver (ϕ 1.5)	
7	VFK1154	Post Height Fixture	
8	VFK1153	Mechanism Neutral Plate (for Post Height)	
9	VFK0906	High Quality Oil (for Thrust Screw)	
10	VFK1155	Neutral Position Plate for REV (Silver)	
11	VFK1156	Neutral Position Plate for PLAYBACK (Black)	
12	VFK1208	Neutral Position Plate for NEUTRAL (Black with hole)	
13	VFK1150	Nut Driver (5.5mm)	
14	VFK1151	Nut Driver (2.5mm)	
15	VFK1188	Dial Tension Gauge (30g)	
16	VFK0948A	Check Light	
17	VFK0749	Froiral Grease (for Plastic Parts : White)	
18	MOR265	Morlytone Grease (for Metal Parts : Black)	
19	VFK1146	Phillips Driver (00-75)	Purchase Locally
20	VFK1147	Phillips Driver (00-100)	Purchase Locally
21	VFK1148	Hex. Driver (1.5mm)	
22	VFK1178	Hex. Driver (0.89mm)	
23	VFK1179	Hex. Driver (0.71mm)	
24	VFK1190	Hex. Wrench (1.5mm)	Purchase Locally
25	VFK1209	Torque Driver (0.4-3.0kg)	
26	VFK0912	Post Axis Driver (1.5mm) (a substitute for VFK1375)	
27	VFK1300	A/D Converter Board (DAQ-12 Quatech)	Purchase Locally
28	VFM3580KM	DVCPRO Alignment Tape	for NTSC only
29	VFM3581KM	DVCPRO Alignment Tape	for NTSC only
30	VFM3582KM	DVCPRO Alignment Tape	for NTSC only
31	VFK3680KM	DVCPRO Alignment Tape	for PAL only
32	VFK3681KM	DVCPRO Alignment Tape	for PAL only
33	VFK3682KM	DVCPRO Alignment Tape	for PAL only
34	VFK3000EDS	DV Alignment Tape (LISTA)	
35	VFK3010EDS	DV Alignment Tape (Color Bar)	for NTSC only
36	VFK3110EDS	DV Alignment Tape (Colour Bar)	for PAL only
37	AJ-CL12MP	Cleaning Tape	SALES Route
38	VFK1357	Extension Board	
39	VFK1358	Extension Cable	for A/C Head
40	VFK1481	LISTA Software	
41	VFK1186	LISTA Cable	
42	VFK1472A	RF Adjustment Software	
43	VFK1248A	Flush ROM Version Up Sftware	
44	VFK1304A	ROM Rewriter	
45	VFK1423	Tape Sensor Casette (M Casstte)	
46	VZZ0095	Cleaning Cross	
47	VFK0369	Twezers	
48	VFK0371	Radio Prier	
49	VFK0372	Cutter Prier	
50	VFK0338	Trimmer Adjustment Driver	
51	VFK0377	Phillips Diver	

1 VFK1145 Back Tension Meter MODEL:T2-M30-P	**2** VFK1149 Post Driver	**3** VFK71 (150g) **4** VFK1191 (45g) Dial Torque Gauge	**5** VFK1152 Torque Gauge Adapter
6 VFK0357 (ϕ 1.5) Eccentric Driver	**7** VFK1154 Post Height Fixture	**8** VFK1153 Mech. Neutral Plate (for Post Height)	**9** VFK0906 High Quality Oil (for Thust Screw)
10 VFK1155 (REV, Silver) **11** VFK1156 (PLAY, Black) **12** VFK1208 (NEUTRAL) (Black with hole) (Gold) (Black)	**13** VFK1150 Nut Driver (5.5mm) 5.5mm	**14** VFK1151 Nut Driver (2.5mm) 2.5mm	**15** VFK1188 (30g) Dial Tension Gauge
16 VFK0948A Check Light	**17** VFK0749 Froiral Grease (White) (for Plastic Parts)	**18** MOR265 Morlytone Grease (Black) (for Metal Parts)	**19** VFK1146 (00×75) **20** VFK1147 (00×100) Phillips Driver
21 VFK1148 (1.5mm) **22** VFK1178 (0.89mm) **23** VFK1179 (0.71mm) Hex. Driver	**24** VFK1190 (1.5mm) Hex. Wrench	**25** VFK1209 Torque Driver (0.4~3.0kgf/cm)	**26** VFK0912 or VFK1375 Post Axis Driver (1.5mm)

27 VFK1300 A/D Converter Board (Quatech DAQ-12)	**28** VFM3580KM **29** VFM3581KM **30** VFM3582KM DVCPRO Alignment Tape (for NTSC)	**31** VFM3580KM **32** VFM3581KM **33** VFM3582KM DVCPRO Alignment Tape (for PAL)	**34** VFM3000EDS DV Alignment Tape (LISTA)
35 VFM 3010EDS DV Alignment Tape (Color Bar) (for NTSC)	**36** VFM 3110EDS DV Alignment Tape (Colour Bar) (for PAL)	**37** AJ-CL12MP Cleaning Tape	**38** VFK1357 Extension Board
39 VFK1358 Extension Cable	**40** VFK1481 LISTA Software **41** VFK1186 LISTA Cable	**42** VFK1472A RF Adjustment Software	**43** VFK1248A Flush ROM Version Up Software
44 VFK1304A ROM Rewriter	**45** VFK1423 Tape Sensor Cassette (M Cassette)	**46** VZZ0095 Cleaning Cross	**47** VFK0369 Tweezers
48 VFK0371 Radio Prier	**49** VFK0372 Cutter Prier	**50** VFK0338 Trimmer Adjustment Driver	**51** VFK0377 Phillips Driver

1-4. Circuit Board Layout

POWER 2 P.C.BOARD

AUDIO P.C.BOARD

AV SYSCON P.C.BOARD

VIDEO I/O P.C.BOARD

POWER 1 P.C.BOARD

TBC P.C.BOARD

SERVO P.C.BOARD

REAR JACK P.C.BOARD

RS232C P.C.BOARD

DIGITAL CORE P.C.BOARD

RF P.C.BOARD

FRONT P.C.BOARD

MOTHER P.C.BOARD
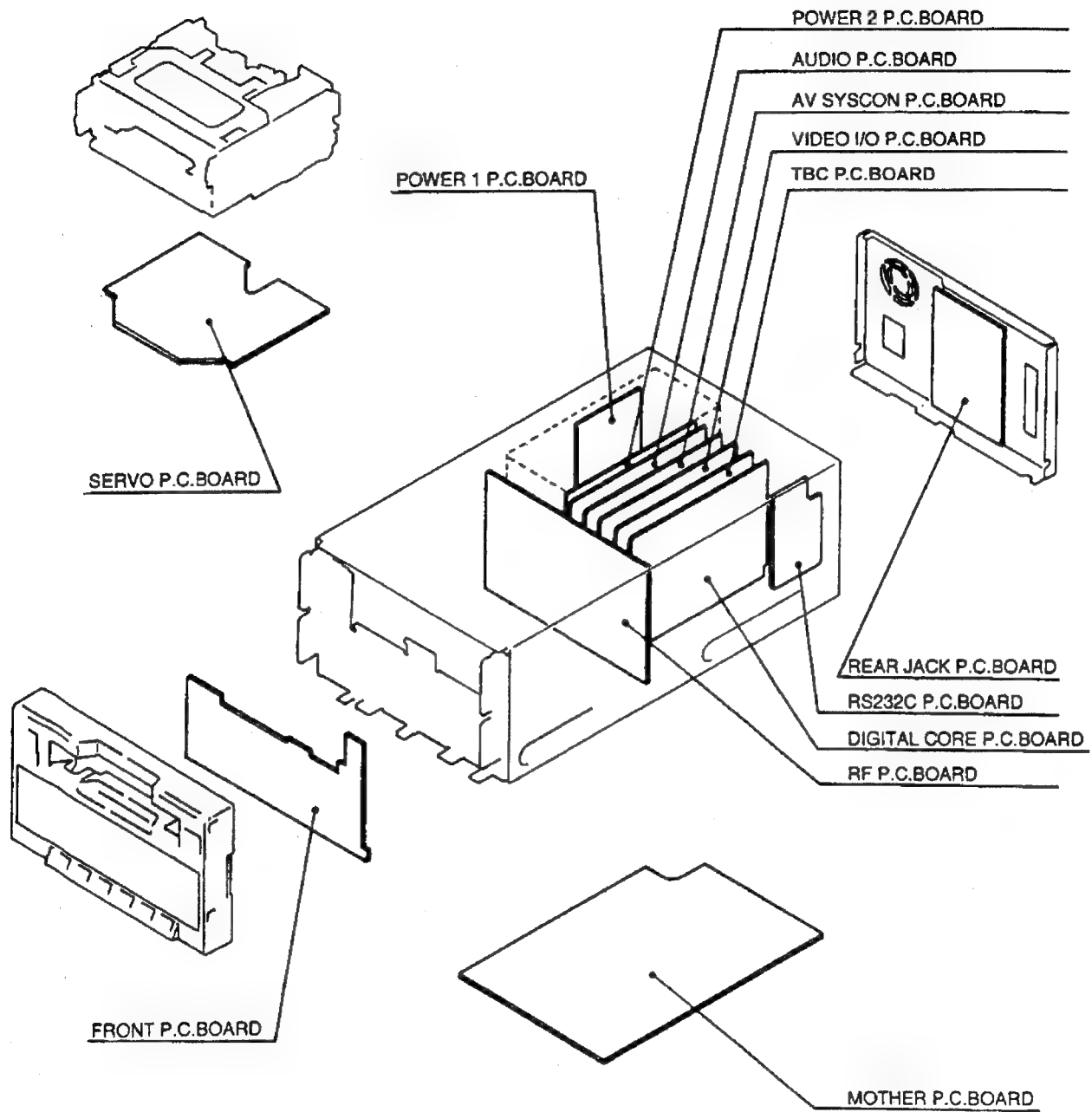
1-5. Alignment Tapes

DVCPRO Alignment Tape

VFM3580KM(NTSC)

Time	Video		PCM		CUE	
(min)	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color Bar SMPTE(75%)	Composite Video Level Confirmation	1kHz - 20dB	Audio Level Confirmation	1kHz 0VU	CUE Level Confirmation
7:00	Color Bar Full Field(75%)	Component Video Level Confirmation				
14:00	H Sweep	Frequency Response			6kHz 0VU	A/C Head Azimuth
18:00	Bowtie(500k)	Y/C Timing				
22:00	Pulse&Bar	Y/C Timing			-10dB, 1kHz 50Hz～15kHz	Frequency Response
26:00	Area Markers					
30:00						

VFM3581KM(NTSC)

Time(min)	Signal
0:00～20:00	ITI Pattern

VFM3582KM(NTSC)

Time(min)	Signal
0:00～10:00	X Value

VFM3680KM (PAL)

Time	Video		PCM		CUE	
(min)	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color Bar 100%	Video Level Confirmation	1kHz -18dBu	Audio Level Confirmation	1kHz Reference level	CUE Level Confirmation
10:00	H Sweep	Frequency Response				
14:00	Area Markers				6kHz Reference level	A/C Head Azimuth
18:00	Bowtie(500k)	Y/C Timing				
22:00	Pulse & Bar	Y/C Timing			1kHz 300Hz~6kHz	Frequency Response
26:00	Multi Pulse	Y/C Timing				
30:00						

VFM3681KM (PAL)

Time (min)	Signal
0:00 ~ 20:00	ITI Pattern

VFM3682KM (PAL)

Time (min)	Signal
0:00 ~ 10:00	X Value

1-6. Recommended Test And Service Equipment

NTSC

Part No.	Name	Remark
TSG130A(OP.04)	Analog Component Signal Generator	TEKTRONIX
	Oscilloscope	
1750,1760(OP.SC) or 1780R	WFM Monitor	TEKTRONIX
	Digital Volt Meter	
	Frequency Counter	
	VTVM	Frequency Band Width 4Hz-500KHz
	Audio Analyzer	

PAL

Part No.	Name	Remark
TSG131A(OP.04)	Analog Component Signal Generator	TEKTRONIX
	Oscilloscope	
1751,1761(OP.SC) or 1781R	WFM Monitor	TEKTRONIX
	Digital Volt Meter	
	Frequency Counter	
	VTVM	Frequency Band Width 4Hz-500KHz
	Audio Analyzer	

2. Disassembly Procedures

2-1. Removal of the Top Plate

1. Loosen the 2 screws on the top side of the unit.
2. Remove the Top Panel with direction of arrow.

TOP PLATE
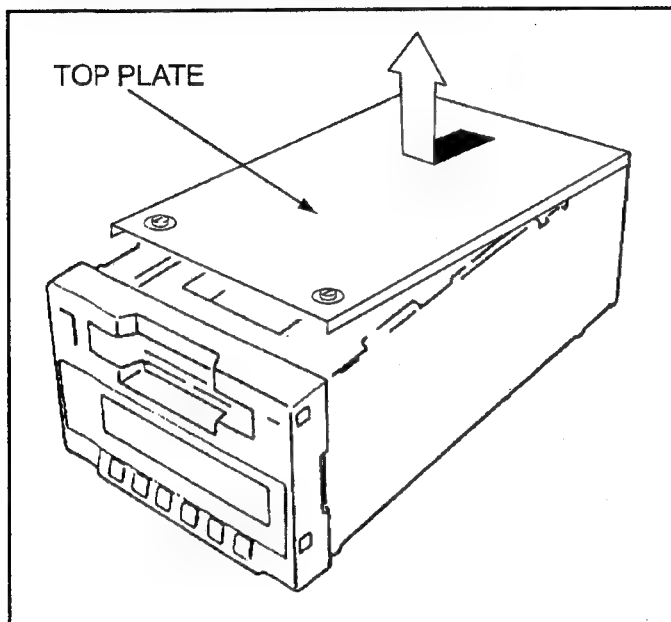
2-2. Removal of the Bottom Plate Unit

1. Unscrew the 4 screws on the both side of the unit.
2. Unscrew the 2 screws on the bottom side, and remove the Bottom Plate Unit.

BOTTOM PLATE UNIT
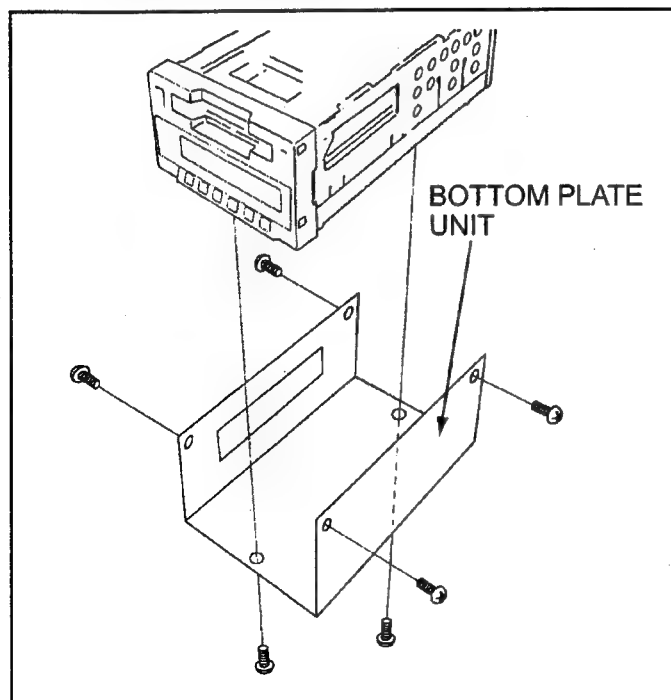
2-3. Removal of the Front Panel

1. Unscrew the 4screws on the both side of the Front Panel.
2. Unscrew a screw on the bottom side of the Front Panel, and unlock the 2 tabs.
3. Disconnect the flat cable which is connected to MOTHER P.C.Board, and remove the Front Panel.

Tab
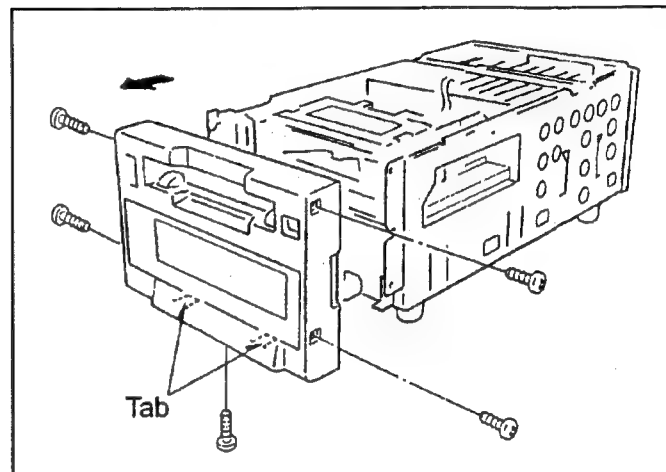
2-4. Removal of the Front Loading Unit

1. Disconnect the connector P1 on Carriage P.C.Booad and disconnect the one connector on part of front loading motor.

Connector   P1
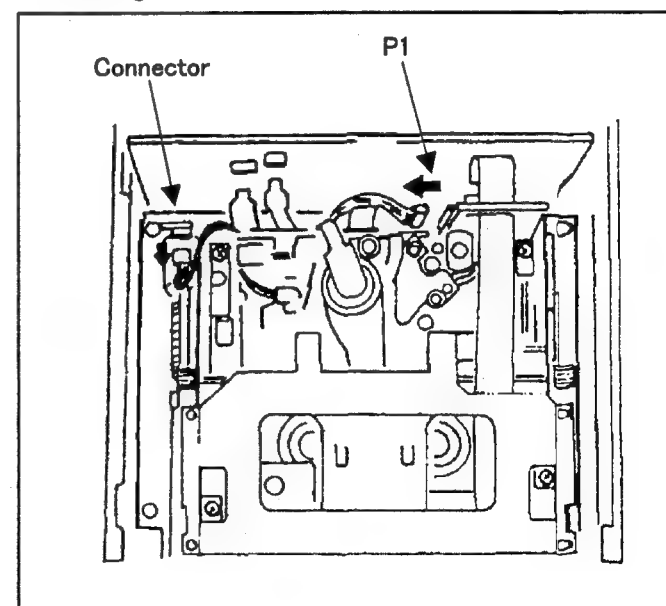
4. Rotate the red plastic screw in front of the worm gear of the cassette down motor counterclockwise by a Phillips-head screwdriver pushing the screw to move the Cassette Holder unit until the 2screws (A) can be removal position.

Rotate the gear
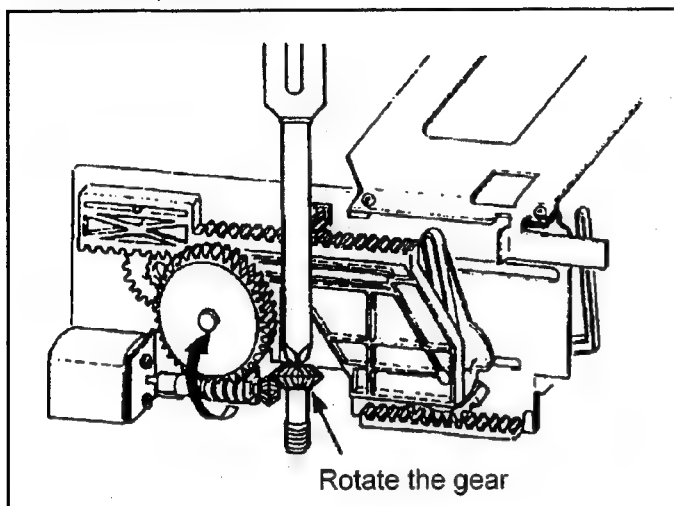
5. Unscrew the 4 screws (A) and (B), then remove the Front Loading Unit.

Screw (B)   Screw (B)
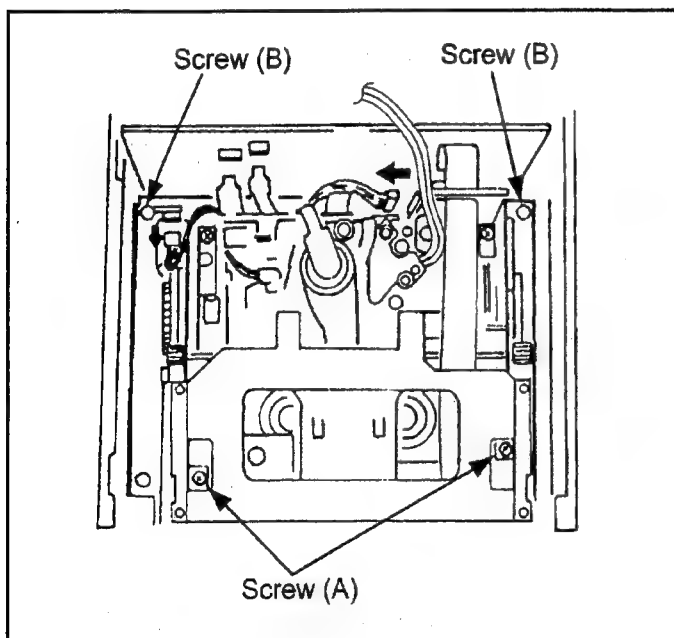
Screw (A)

2-5. Removal of the Power Supply Unit

1. Disconnect the 2 connectors with the Power Supply Unit on the bottom side of the unit.
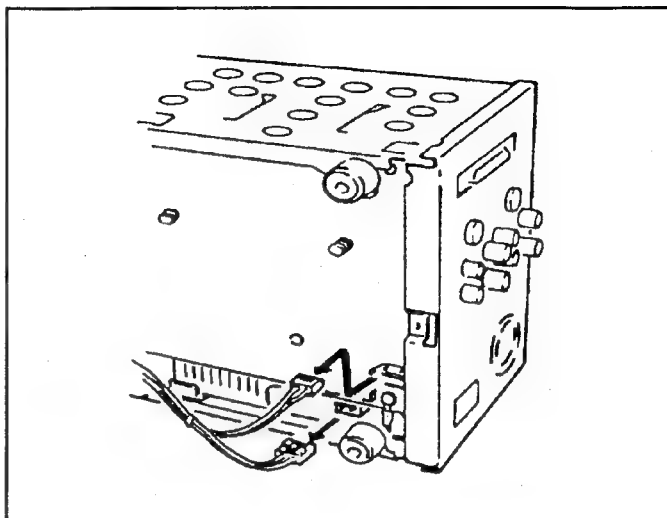
2. Unscrew the 3 screws with the P.C.Board Angle on the top side of the unit.
3. Unscrew a screw on the Rear Jack Plate and 2 screws wit the Power Supply Unit on the top side of the unit.

P.C.B. Angle

Power Supply Unit
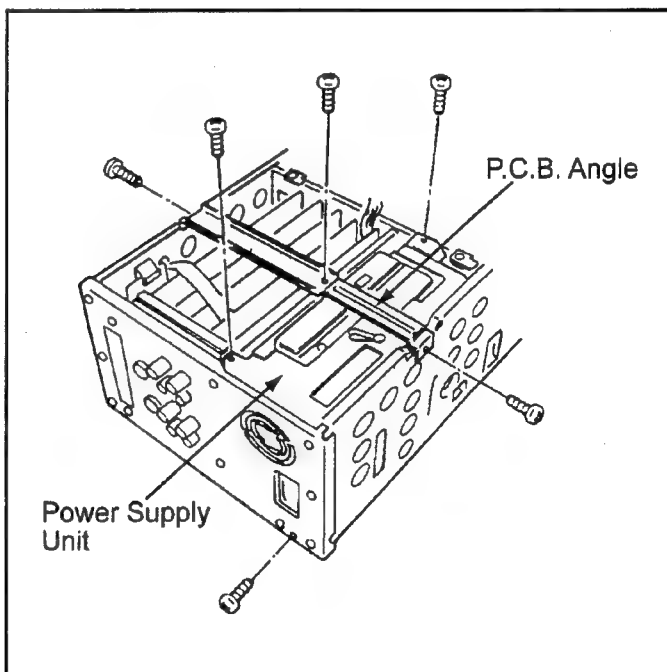
2-6. Removal of the Rear Jack Plate

1. Unscrew the 8 screws with the Rear Jack Plate on the rear side of the unit.
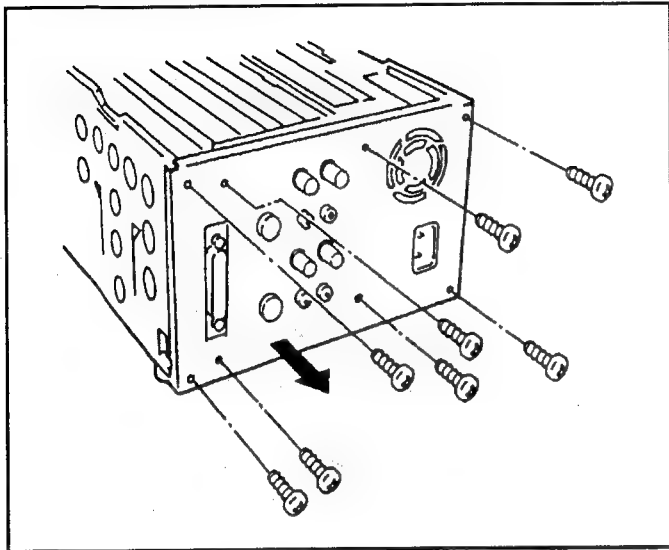
2-7. Removal of the Mechanism Unit

1. Remove the Front Loading Unit.
2. Remove the Bottom Plate Unit.
3. Disconnect the connector P2001,P2002,P2003 and P2004 on the Servo P.C.Board.
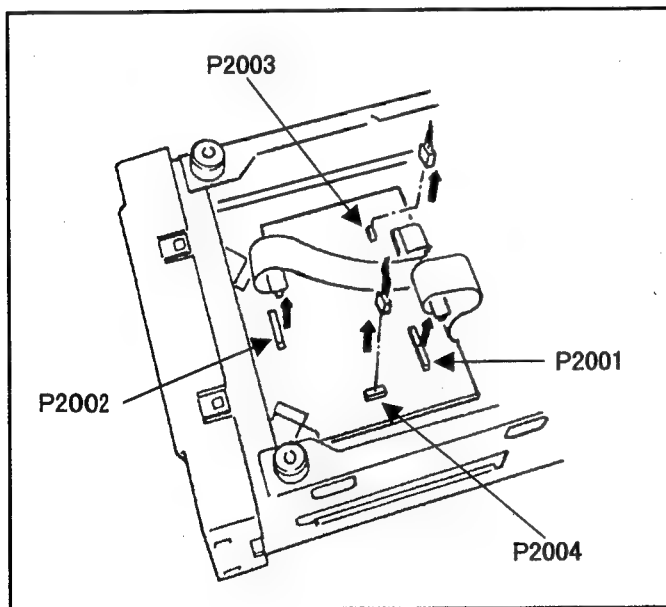
4. Disconnect the connector P41002 on AUDIO P.C.Board, which connected between A/C Head and AUDIO P.C.Board.
5. Disconnect the connector P5001 and P5201 on RF AMP P.C.Board, which are connected between the Cylinder Unit and the RF P.C.Board.
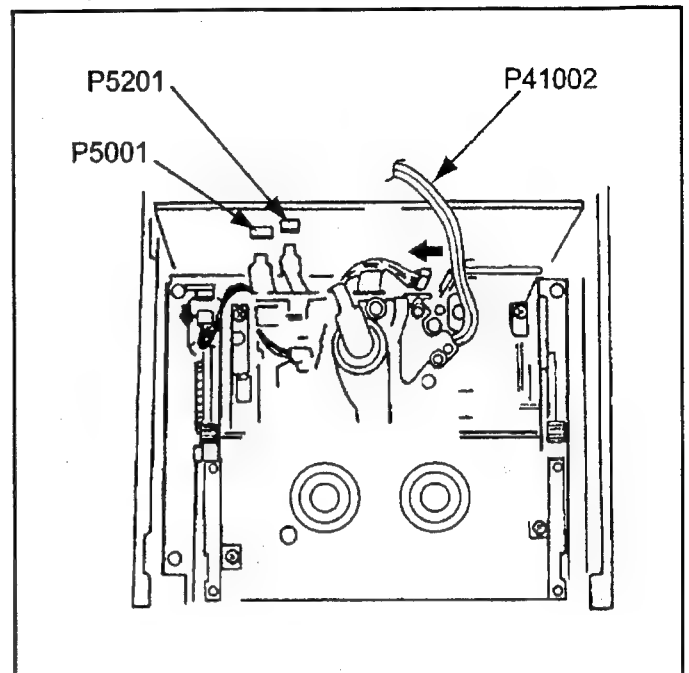
6. Unscrew the 4 screws on the Plate, which plate installed Mech Chassis Unit. And remove the Mech Chassis Unit with Plate from VTR.
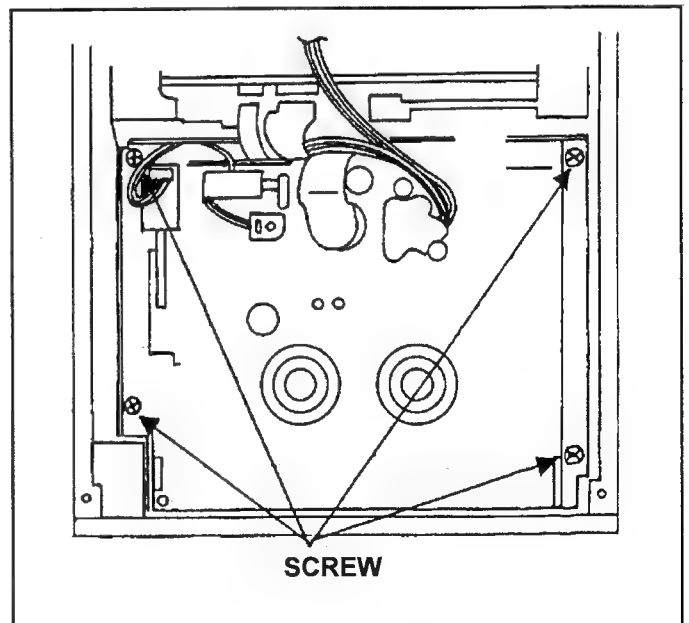
SCREW

7. Unscrew one screw, which fixed earth cable from Servo P.C.Boaed.
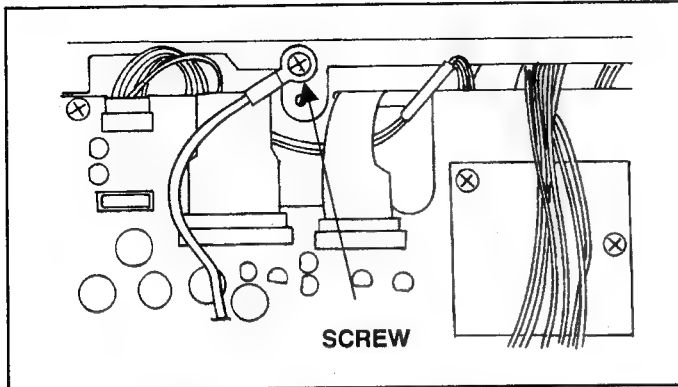
SCREW

8. Unscrew 3scres , which fixed Mech Chassis Unit to Plate and Remove the Mech Chassis Unit.
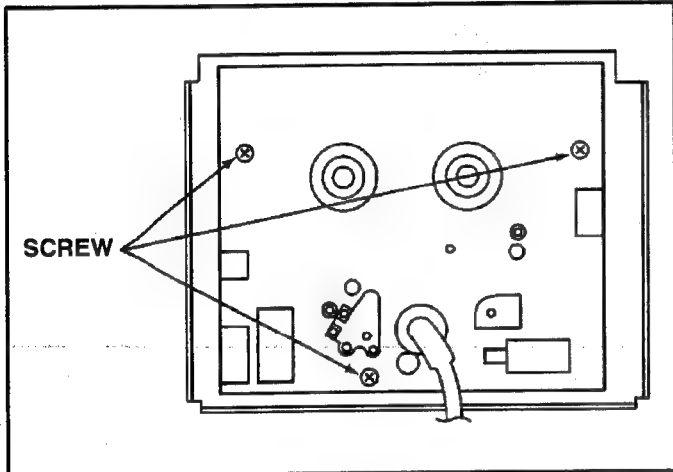
SCREW

2-8. Removal of the Cylinder Unit

1. Please operate follow the item number 1 to 6 on explanation of " 2-7. Removal of Mech Chassis Unit".
2. Remove the T1 Guide.
3. Disconnect the connector P2033 on Servo P.C.Board. and unscrew 3 screws, which have spring from the Cylinder Unit.
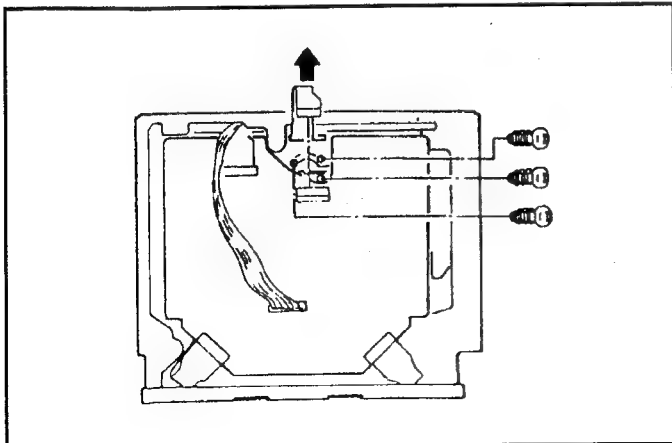
4. Unscrew one screw , which fixed flexible cable from top of Cylinder unit. And remove the Cylinder unit without touching any mechanical parts.

CYLINDER UNIT
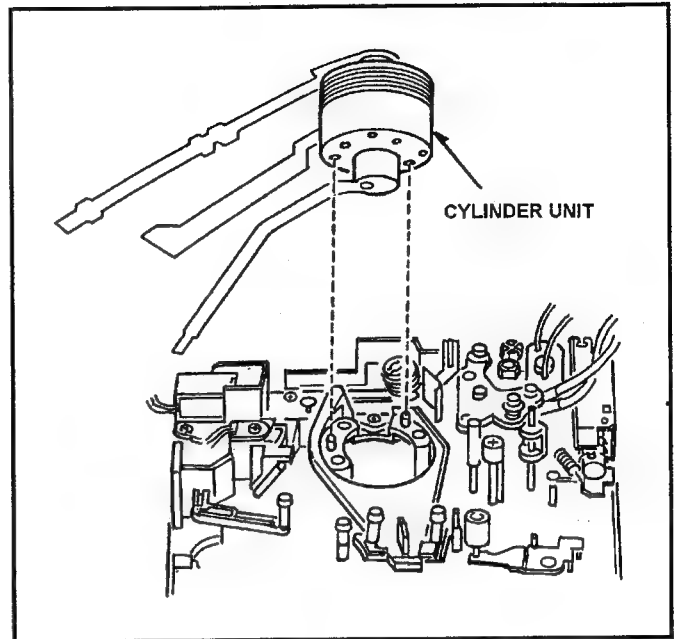
2-9. Removal of the Fan Motor Unit

1. Remove the Rear Jack Plate.
2. Unscrew the 2 screws.
3. Disconnect the connector which is connected to the POWER P.C.Board, then remove the Fan Motor Unit.
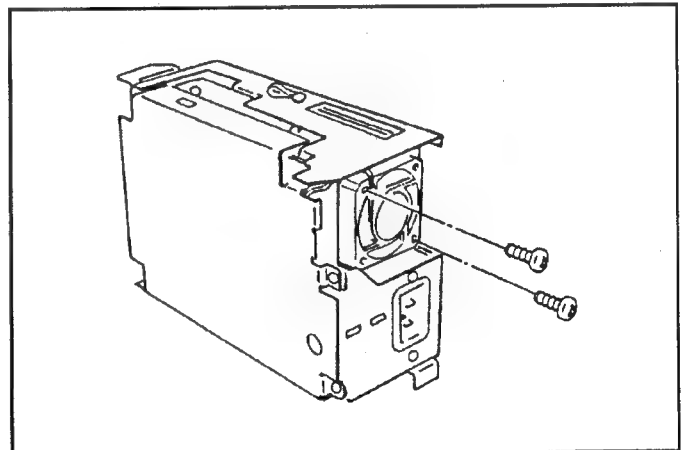
3. Manual Tape Eject

When a tape can not be ejected, because of Power failure or mechanical tape damage, remove the tape manually.

1. Turns power off and remove the top Case Unit.

2. Rotate the red plastic screw by a Phillips - head screwdriver counterclockwise pushing the screw. It needs to rotate about 30 times rotation until starting to move.

3. Since tape slack will develop when the post is unloaded, wind up the supply reel to take up the slack.

   How to take up the slack (see ③)

   a. Insert the rubber side of the take-up jig into the cassette tape withdrawal opening on the VTR's mechanism side.

   b. Turn the flange part of the supply reel in the direction of take-up to take up the tape slack. (Take care not to damage the tape in the process.)

Take-up jig (provided)

Rubber side

This end can be used in place of the Phillips head screwdriver.
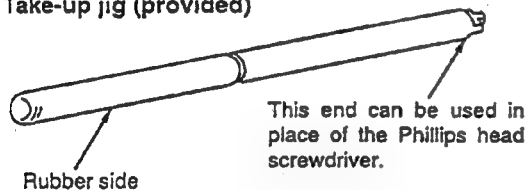
4. Repeat item 2 and 3 until the tape in wound Completely inside of the cassette.

5. When the tape is completely inside of the cassette, rotate the red screw in front of the worm gear of the cassette down motor clockwise by a Philips-head screwdriver pusing the screw and remove the cassette cover does not bite the tape when the cover is closed.

②

③

⑤

Rotate the Red Screw
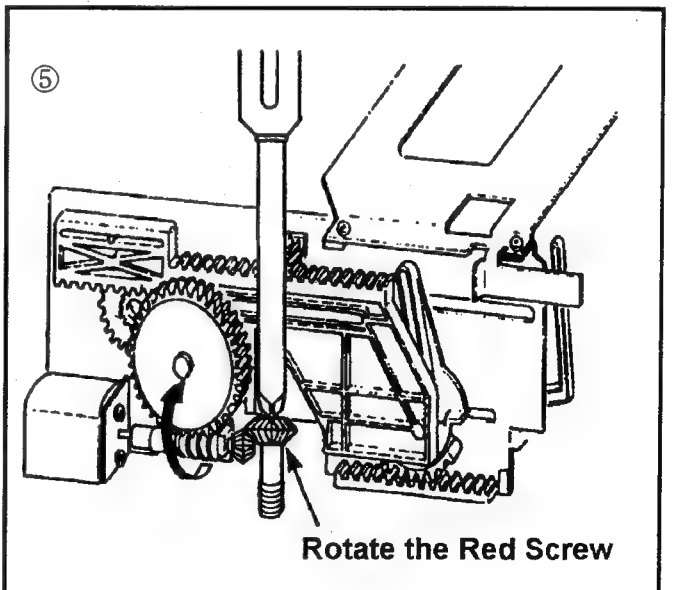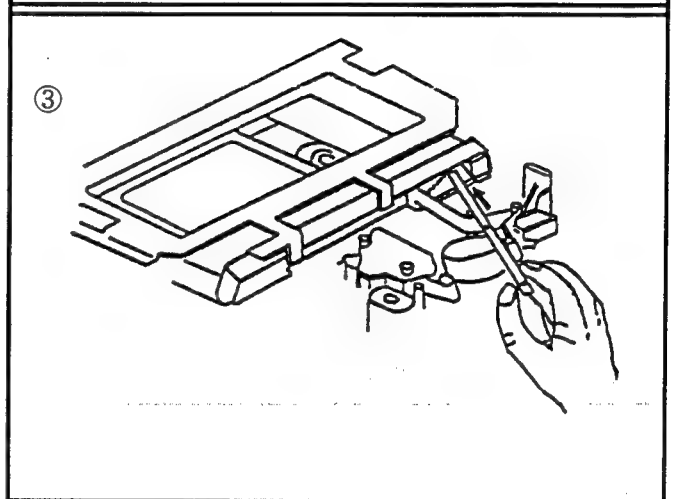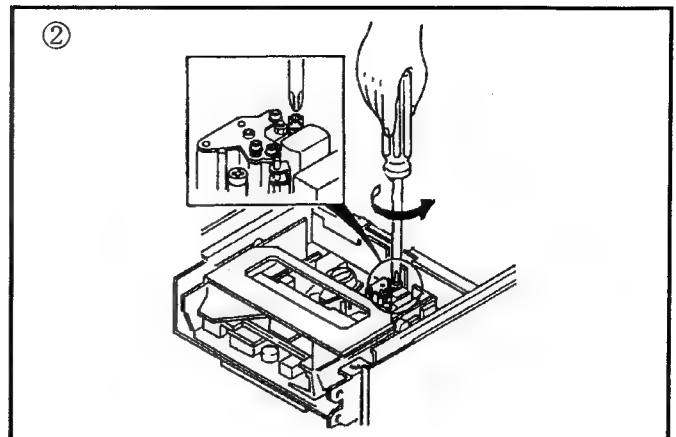
4. Cleaning Procedures

Note: Turns power off during cleaning.

Make sure the power is OFF before cleaning. Use ethanol(more than 99% purity) as cleaning liquid.

4-1 Cleaning of Head Chips: (Daily)

Clean heads by applying even pressure and rotating cylinder a few times. Never wipe in up and down motion. Never touch a cylinder by naked hand. First wipe with a cloth soaked by cleaning liquid. Then wipe with dry cloth.
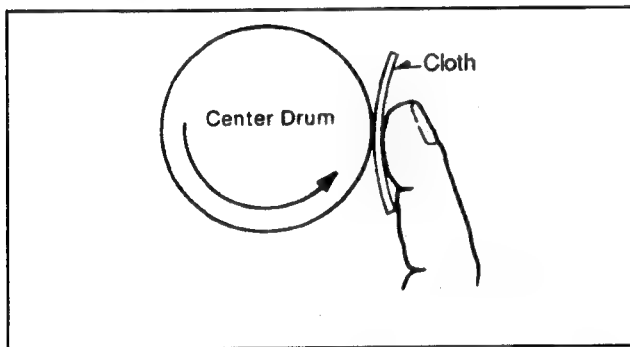
4-2. Cleaning of Drum Lead: (Weekly)

Be careful not to touch a head chip. Clean the drum lead with a pick.
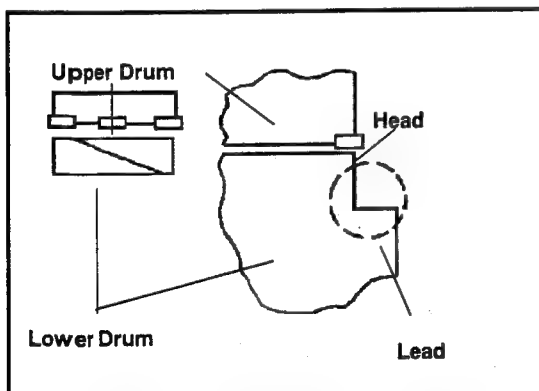
4-3. Cleaning of A/C Head: (Weekly)

Wipe the A/C head with a cloth soaked by cleaning liquid. Wipe again with a dry cloth.
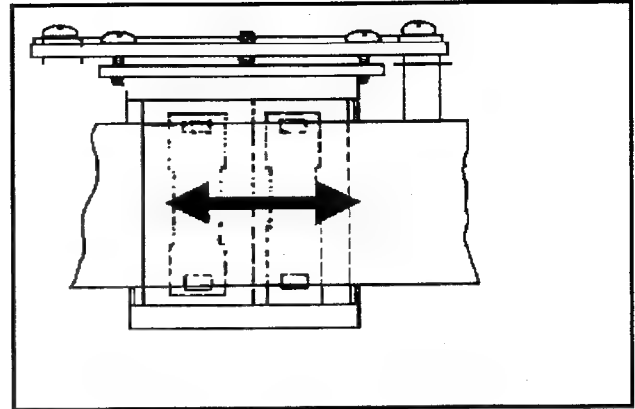
4-4. Cleaning of Pinch Roller and Capstan: (Weekly)

Wipe the Pinch Roller and Capstan with a cloth soaked by cleaning liquid.
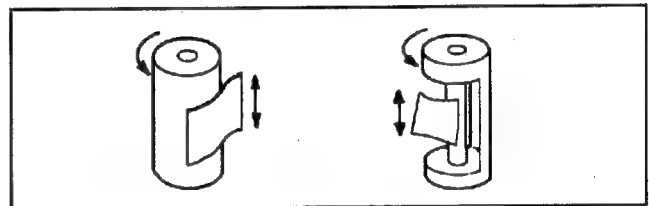
4-5. Cleaning of Post :(Weekly)

Wind a cloth on a pick. Wipe each post dry with that pick . Wipe again with a dry cloth. For metal posts wipe with cleaning liquid. Then wipe dry again.
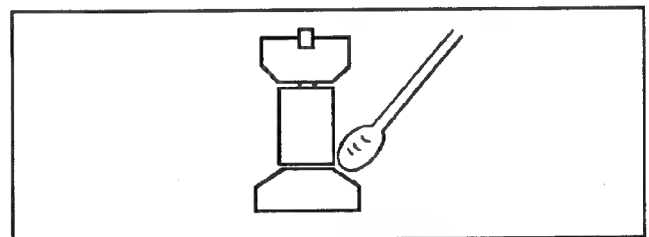
Note:

Use the clean cloth for cleaning purpose. Do not use any dirty cloth.

The Cleaning Cloth can be ordered as spare part. The part number indicated as below.

CLEANING CLOTH : VZZ0095

5. Mechanical Adjustment

5-1. Name of tape transportation

S1

T1

S2

T2

CYL

S3

CAPSTAN

S4
(TENSION POST)

T3

T4

S5
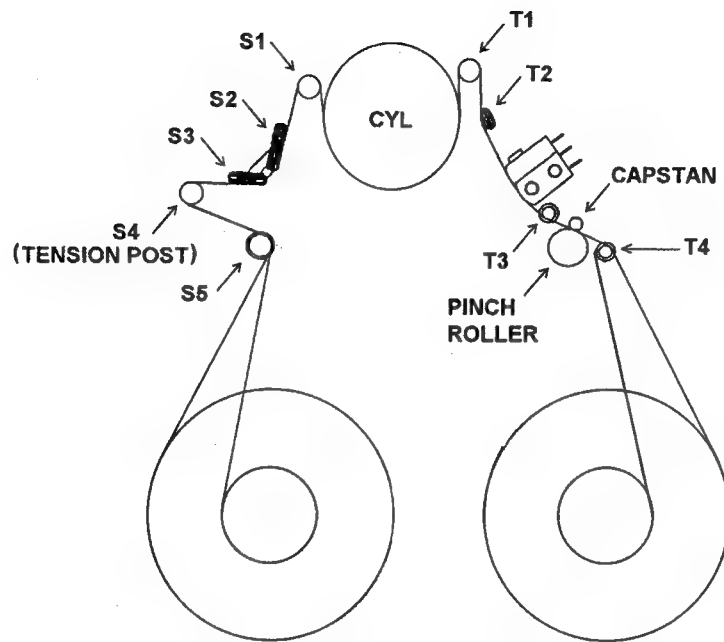
PINCH
ROLLER

5-2.Pinch Solenoid Position Adjustment

SPEC.	T = 0.3mm
TEST POINT	Gap T
ADJUSTMEN	Screw(A), Hole(B)
MODE	EJECT（Power OFF）
TOOL	VFK0357(Eccentric Driver)

1. Confirm the power of condition at VTR.
2. Push the pinch roller by hand to be close to capstan.
3. Push the pinch solenoid by hand so that the pinch roller contacts capstan.
4. Loosen the two screws (A) and adjust the hole (B) by VFK0357 so that gap (T) is within specification.
5. The position for confirm Gap, which is located spring scratch to Plate (C) side.
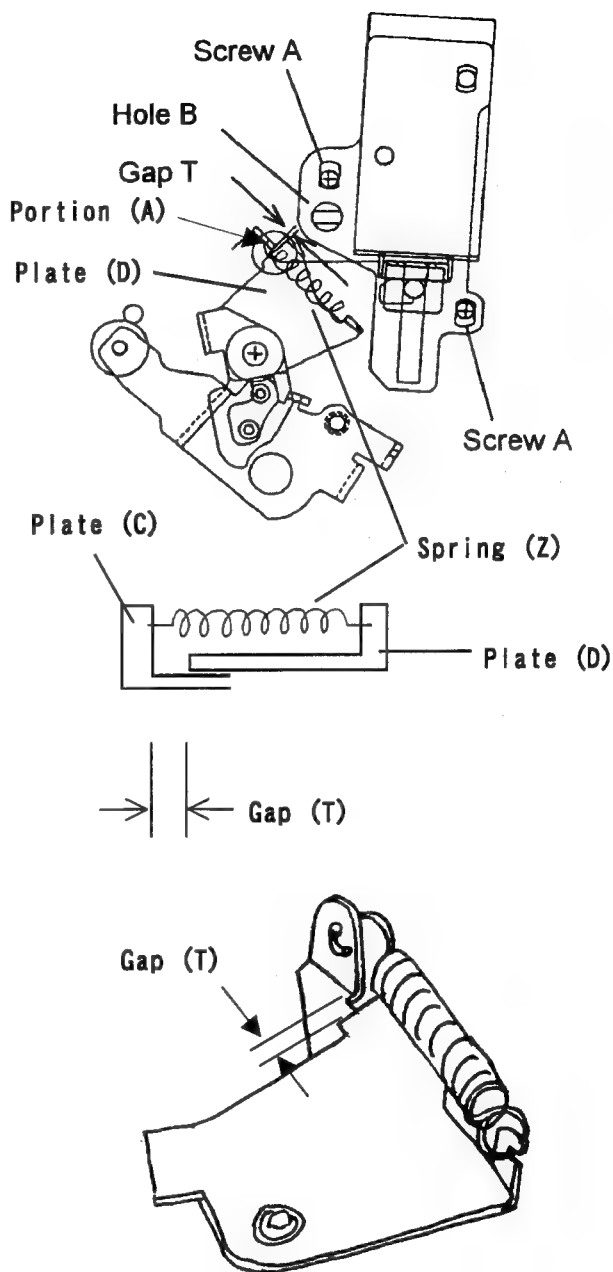
5-3. Main Brake Torque Confirmation

SPEC	Direction A = 40±20g·cm
	Direction B = 20±10g·cm
TEST POINT	S reel、T Reel
MODE	EJECT （POWER OFF）
TOOL	VFK71(150g)、VFK1191(45g)、VFK1152

1. Remove the Cassette Up Unit.
2. Install the adapter(VFK1152) to the torque gauge (VFK71).
3. Put the torque gauge on **S Reel and** Turn the torque gauge to **direction A** until **S Reel** slips against brake.
4. Confirm the torque is within specification.
5. Put the torque gauge on **T Reel and** turn the torque gauge to **direction A** until **T Reel** slips against brake.
6. Confirm the torque is within specification
7. Install the adapter(VFK1152) to the torque gauge (VFK1191).
8. Put the torque gauge on **S Reel and** turn the torque gauge to **direction B** until **S Reel** slips against brake.
9. Confirm the torque is within specification.
10. Put the torque gauge on **T Reel** and turn the torque gauge to **direction B** until **T Reel** slips against brake.
11. Confirm the torque is within specification.

Cylinder
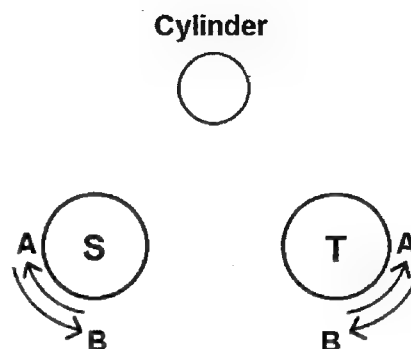
5-4. Post Height Pre-adjustment

MODE	EJECT（POWER OFF）
TOOL	VFK1153, VFK1154 （Flange Tool）

1. Confirm that the Reel Table is located at M-Cassette position.
2. Install the Mech. Neutral Plate (VFK1153) and adjust each post height as shown in figure.
3. Adjust the each post to Lower limit by VFK1154 as shown in figure.
4. VFK1149 use for Post height adjustment of S4 and S5 post. VFK1151 use for Post height adjustment of T3 and T4 post.

Post	Limit	Post Driver
S5 Post	Lower*	VFK1149
S4 Post	Lower*	VFK1149
T3 Post	Lower	VFK1151(2.5mm Nut Driver)
T4 Post	Lower	VFK1151(2.5mm Nut Driver)

Note: Lower* : Turn **S4** and **S5** posts 1 round more counterclockwise from lower limit position.

VFK1154
VFK1153
Lower Limit

VFK1154
VFK1153
Upper Limit
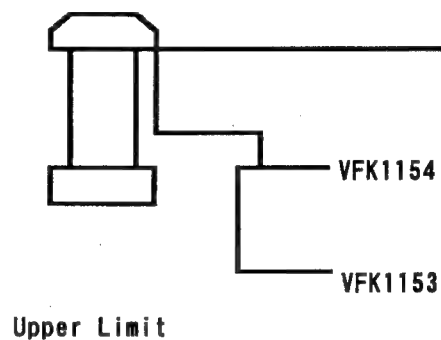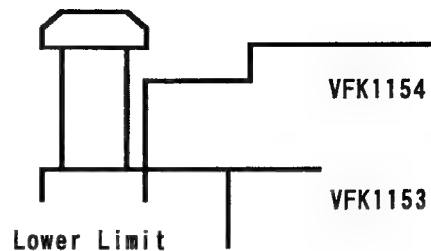
5-5. Tension Adjustment Flowchart

(START)

↓

Tension Offset Adjustment

↓

Neutral Position Adjustment

↓

Playback Voltage Adjustment

↓

Rev Voltage Confirmation — NG

OK

↓

Tension Spring Adjustment

↓

Rev Tension Confirmation — NG

OK

↓

(END)

TENSION REGULATOR

A

TENSION REGULATOR BASE
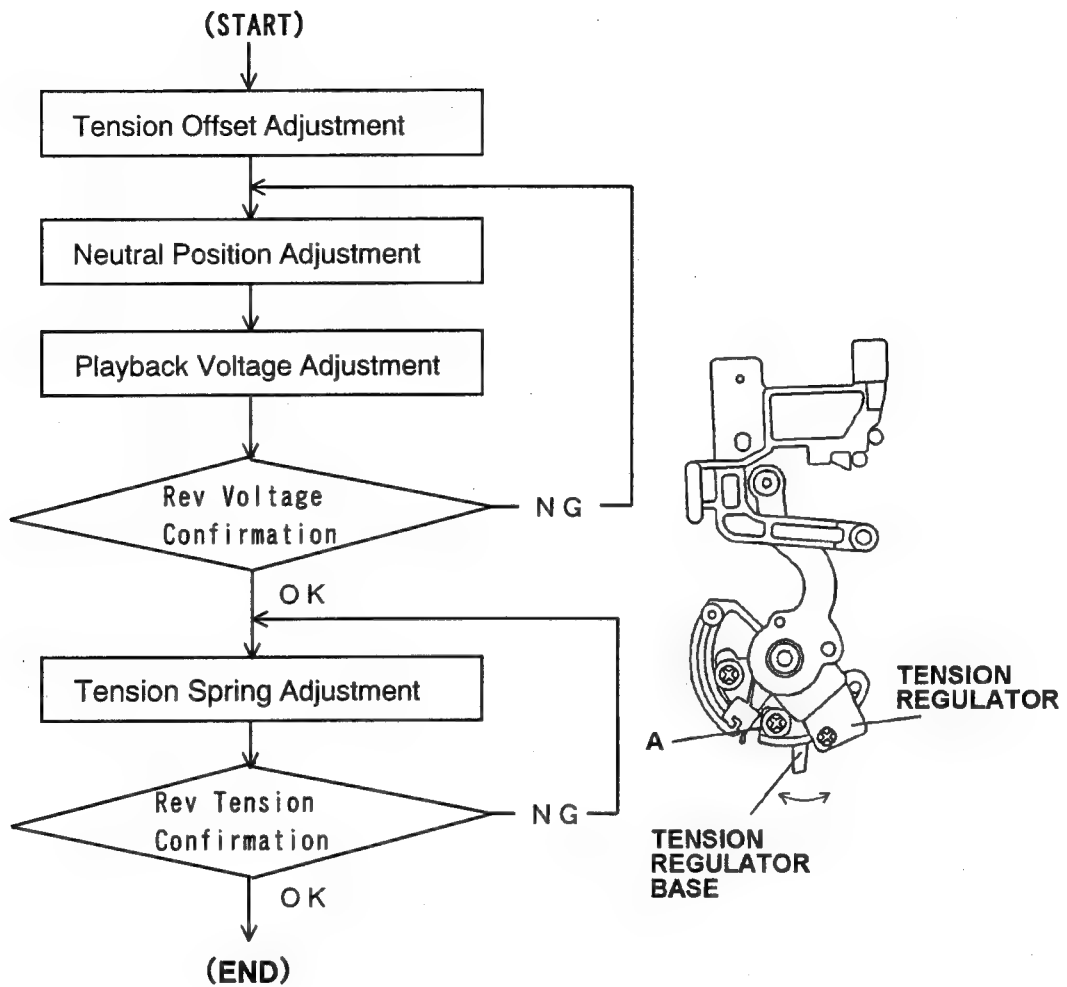
5-6. Tension Offset Adjustment

BOARD	RF
SPEC	2.5±0.05V
TEST POINT	TP5901(TP901 on RF Board.)
ADJUSTMENT	A05:TENSION OFST (SERVO ADJUST)
MODE	EJECT
TOOL	Digital Volt Meter

1. Open the SERVO ADJUST menu on Service menu and select the item "A05:TENSION OFST"
2. adjust the EVR(A05:TENSION OFST) so that the DC voltage at TP901 is within specification.

5-7. Tension Arm Neutral Position Adjustment

BOARD	RF
SPEC	2.5±0.1V
TEST POINT	TP5901(TP901 on RF Board)
ADJUSTMENT	Base position of Tension Regulator Board
MODE	STOP
TOOL	Digital Volt Meter VFK1208 (Black. with hole)

1. Unscrew the 2 screws and remove the Carriage Support Panel on the Front Loading Unit.
2. Disconnect the connector P3 on the Carriage Board of the Front Loading Unit..
3. Unscrew the 6 screws and remove the Top Plate on the Front Loading Unit.
4. Install the VFK1208(black with hole) as shown in figure
5. Connect the Digital Volt Meter to Test point.
6. Place the unit into the no tape loading mode(Refer to No tape loading mode procedure as mentioned as below.
7. Loosen the screw (A) and move the lever (D) with tweezers for adjust the sensor position so that the DC voltage at TP901 is within specification.

[No tape loading procedures]

Open the SERVO ADJUST menu on the Service menu and select the "A05:TENSION OFST". Press [BIGIN] button, then loading is started. During adjustment, keep loading condition. (After finish Adjustment ,press [BIGIN] button again to unloading action.)

CAUTION: 1. Do not use magnetized tweezers and Screw driver.
   2. Do not touch the magnetize Screw driver to S-Reel FG magnet portion, when the lever (D) portion is adjusting.

(VFK1208)
Tension Arm Tool

Attach to surface

TENSION POST

A

D

TENSION REGULATOR BOARD

SCREW

SCREW

TOP PLATE
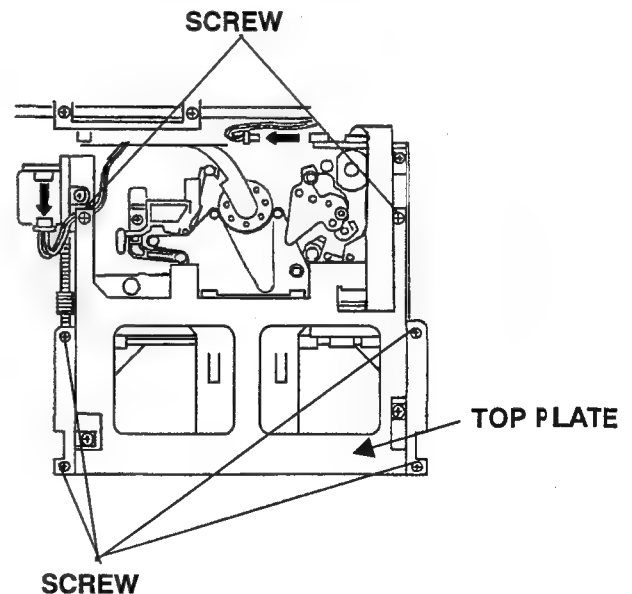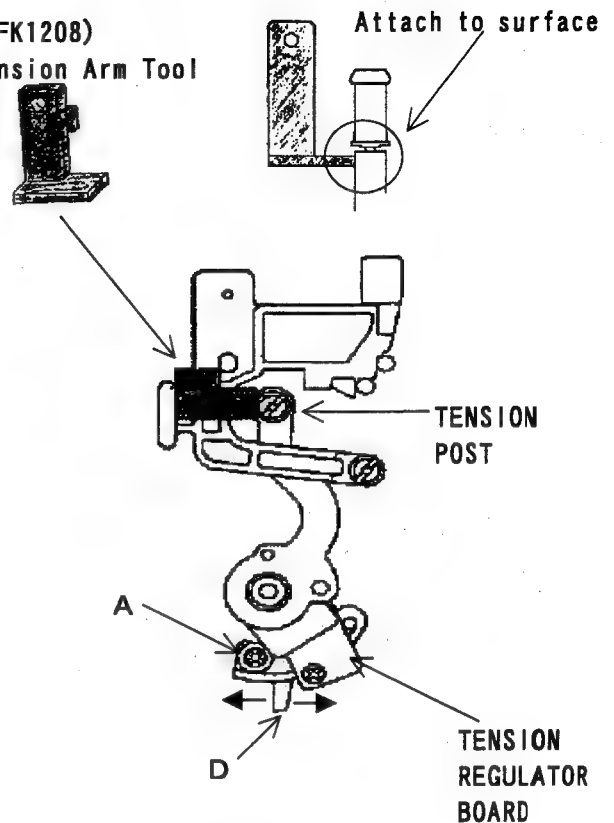
5-8. Tension Arm PLAY and REV voltage adjustment

BOARD	RF
SPEC	(PLAY) 3.8±0.05V (REV) 1.2±0.3V
TEST POINT	TP5901(TP901 on RF Board)
ADJUSTMENT	VR9501(VR501 on Mother Board)
MODE	STOP
TOOL	Digital Volt Meter VFK1156(Black:for PLAY position) VFK1155(White:for REV position)

1. Install the VFK1156(black) as shown in figure.
2. Connect the Digital Volt Meter to Test point.
3. Place the unit into no tape loading mode.
4. Adjust the VR501 so that the DC voltage at TP901 is within specification (PLAY).
5. Install the VFK1155 as shown in figure and confirm that the DC voltage at TP901 is within specification (REV).
6. If it out of spec, perform the Neutral Position adjustment again.

VFK1156
VFK1155

TENSION POST

A

D

TENSION REGULATOR BOARD
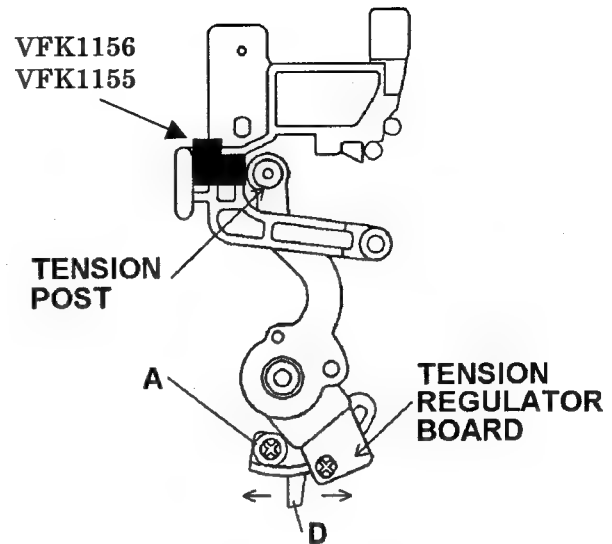
5-9. Tension Regulator Spring Adjustment

BOARD	RF
SPEC	11±1gf
TEST POINT	TP5901(TP901 on RF Board)
ADJUSTMENT	Tension Regulator Spring hook (B)
MODE	STOP
TOOL	Digital Volt Meter VFK1188(30g Dial Tension Gauge)

1. Connect the Digital Volt Meter to Test point.
2. Place the VTR into no tape loading mode.
3. Insert the tension gauge to push the tension post to the direction R until the voltage at the TP901 is 3.8V (PLAY position)
4. Loosen the screw (C) and adjust the position of hook (B) so that the indication of gauge is within specification..

R →

loose

tight   C

TENSION REGULATOR SPRING

SPRING HOOK(B)
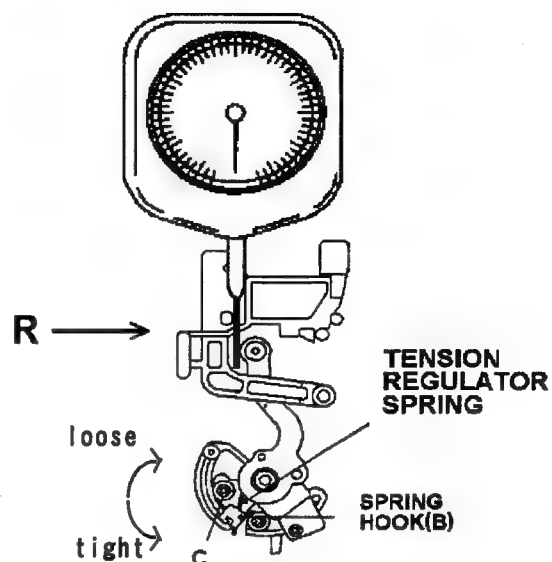
5-10. REV Tension Confirmation

BOARD	RF
SPEC.	18±2gf
TEST POINT	TP201(SERVO:F1)
MODE	STOP
M.EQ	Digital Volt Meter VFK1188(30g Dial Tension Gauge)

1. Connect the Digital Volt Meter to Test point.
2. Place the VTR into no tape loading mode.
3. Insert the tension gauge to push the tension post to the direction R until the voltage at the TP901 is 1.2V (REV position)
4. Confirm that the indication of gauge is within specification. If not, make the Tension Spring Adjustment again.
5. After finish this adjustment , grew the screw A,B and C . The grew quantity at B is half of A and C.

R ⟶

TENSION REGULATOR SPRING

B

SPRING HOOK(B)

A

C
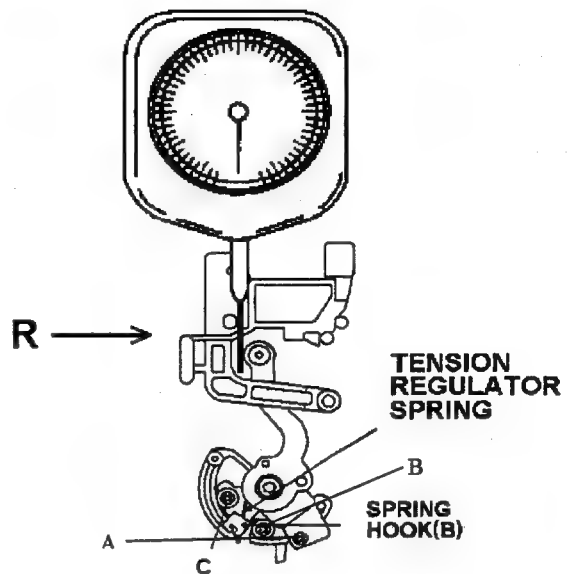
5-11. Tension Confirmation

SPEC	(PLAY)6.0±1gf
	(REV) 9.0±2gf
MODE	PLAY、REV×1
TAPE	63 min M size Blank Tape
TOOL	VFK1145(Tension Meter)

1. Play back beginning portion of the tape.
2. Insert the tension meter between **S3 post** and **S4 post**.(Refer to figure).
3. Confirm the tension is within specification.
4. Place the unit in REV mode.
5. Insert the tension meter between **S4 post** and **S5 post**.(Refer to figure)
6. Confirm the tension is within specification.

NOTE: Be careful not to give some tape damage.
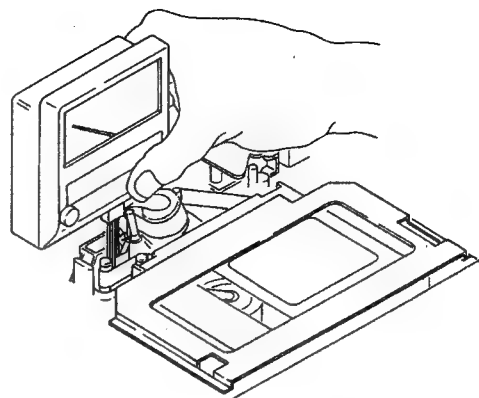
Play Tension
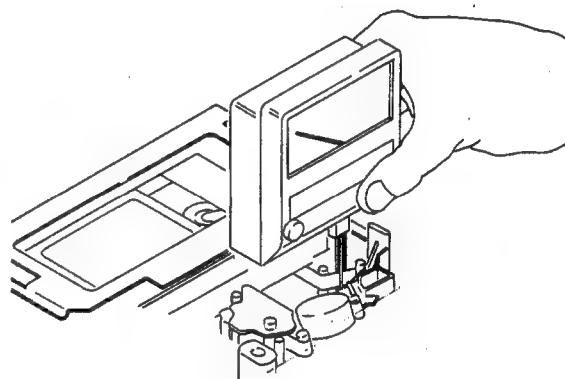
Rev Tension

5-12. Tape Pass Adjustment Procedure

START

1-13 Envelope Waveform Adj.

OK

1-14 Post Limit Conf. (PLAY)

OK

1-16 A/C Head Tilt Adj.

OK

1-17 A/C Head Height Adj.

OK

1-18 A/C Head Azimuth Adj.

OK

1-19 A/C Head Tilt Conf. — NG

OK

1-20 A/C Head Height Conf. — NG

OK

1-21 A/C Head Azimuth·X-value Adj. — NG

OK

1-22 REV Tape Pass Conf. (T4 Post Adj.) — NG → T4 Post Adj.

OK

NG (PLAY)   1-23 CTL Self-Recording Level Conf.   NG (REV)

OK

1-24 PLAY Tape Pass Limit Conf. — NG → Each Post and A/C Head Adj.

OK

1-25 Conf. Of Envelope REV,REW and FF mode — NG → S4 Post Conf.

OK

1-26 Conf of PLAY start Envelope

OK

1-27 REV Tape Pass Limit Conf. — NG → Each Post Limi Conf.

OK

1-28 FF/REW Tape Pass Limit Conf — NG → Each Post Limi Conf.

OK

1-29 Screw Lock Tight of A/C Head,T3,T4 Post

END   To PG·and LISTA Adj

3—26

5-13. Envelope Waveform Adjustment

SPEC	V1/Vmax、V2/Vmax、V3/Vmax $\geqq$ 0.8
TEST POINT	TP5251:R/P ENV (TP251 on RF Board.) (RP ENV is selected by Service menu) TP5759:TRIG(TP759 on RF Board.)
ADJUSTMENT	S1、T1 Post Height
MODE	PLAY(ATF)
TAPE	**NTSC:** VFM3580KM **PAL:** VFM3680KM
M.EQ	Oscilloscope
TOOL	VFK1149(Post Driver)
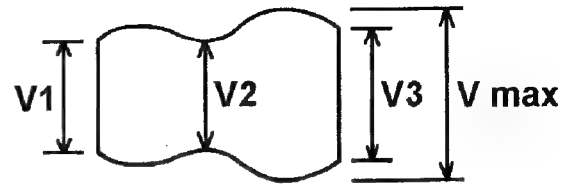
1. Open the MODE SELECT menu on Service menu and set the item "B05 PB HEAD" to "RP"(counter displayed 00001).
2. Playback the alignment tape.
3. Adjust S1 and T1 post height so that the R/P envelope output is within the specification.
4. When the S1 and T1 posts are adjusted, first raise the post height and make small the entrance and exit side of the envelope, then down the post until envelope becomes flat.
5. With order to adjustment, basically adjust T1 post for makes flat at exit side of envelope first and adjust S1 post.
6. After finish this adjustment, unload the tape and load the tape again, then confirm the shape of Envelope waveform does not changed.

5-14 Post Limit Confirmation (PLAY)

SPEC	Post limit shown in the table No tape curl
MODE	PLAY
TAPE	Blank Tape
TOOL	VFK1149(Post Driver) VFK1151(Nut Driver)

1. Confirm that the tape pass limit follow the as shown as below table and adjust it in case of need.
2. Confirm that the kinds of D、E and F condition do not appeared on the tape as shown in figure.

Post	Limit	Adjustment
S5	Lower limit or Free	S5 Post Height
S4	Lower Limit	S4 Post Height
S1	Upper Limit	Envelope waveform
T1	Upper Limit	Envelope waveform
T3	Lower Limit	T3 Post Height
T4	Lower limit or Free	T4 Post Height

A: UPPER **B: FREE** **C: LOWER**

D: Curl **E: Bend** **F: Drop**

5-15. A/C Head Adjustment Method

Adjustment Item	SCREW	Adjustment Method	Torque
Tilt adjustment	A	Tighten direction・・・Decrease CUE Loosen direction・・・Increase CUE	
Height adjustment	B	Tighten direction・・In case of increase CTL, when A/C Head Press down. Loosen direction・・In case of increase CTL, when A/C Head lift up.	
Azimuth adjustment	F	Phase is adjusted by screw F	
X-value adjustment	C D	Adjust X-value by VFK0357 at Hole (E), then tighten the screw (C) and (D) to fix A/C Head horizontal position.	2.5Kg.cm
Fixed Tilt and Azimuth	G	Screw (G) is always tighten during adjustment except Tilt and Azimuth.	1.0Kg.cm
Fixed height	H	After height adjustment, tighten the screw (H) to fix height of A/C Head.	

SCREW	Tool for adjustment
A	VFK1178 (0.89mm Hex Driver)
B	VFK1150 (5.5mm Tool for adjustment)
F	VFK1148 (1.5mm Hex Driver)
C,D,G	VFK1209 (Torque Driver) VFK1375 (1.5mm Post Axis Driver)
H	VFK1190 (1.5mm L type of Hex Wrench)

1. Each adjustment of A/C Head should be perform under the screw (G) tightened.
2. Confirm the screw (A) does not loosen, before execute the A/C Head Tilt adjustment. The screw (A) should be always touch to top of A/C Head.
3. Be careful the tape damage at T3 Post, when adjust tilt of A/C Head.
4. When the height of A/C Head is adjusted by Nut (B), first the screw (H) should be loosen. And after height adjustment finished, tighten the screw (H) lightly.
5. Each adjustment of A/C Head should be finished at the condition of turn the each adjustment screw tighten direction. And hit the portion (L) lightly for remove the distortion.
6. Adjust alternately each A/C Head adjustment with Envelope Waveform adjustment.

ERASE   T3 POST

R/P

A/C HEAD HEIGHT

C
E
F   B
A
L   D
Lift up Portion   H
G

Press down Portion
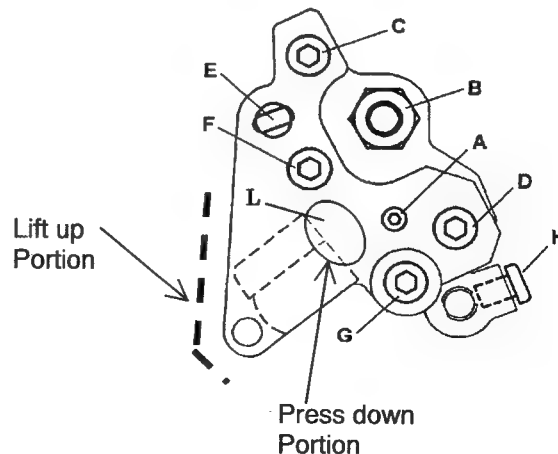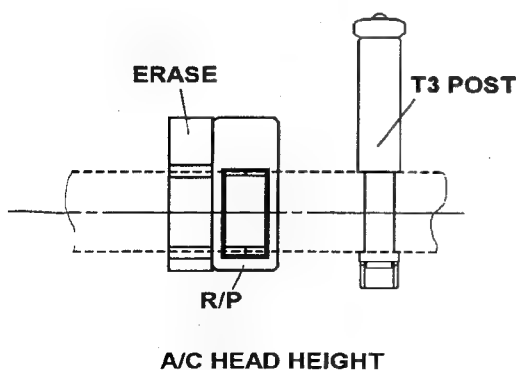
5-16. A/C Head Tilt Adjustment

SPEC	Lower limit at T3 Post No tape curl
ADJUSTMENT	SCREW A and G (A/C Head)
MODE	PLAY
TAPE	Blank Tape
M.EQ	VFK1148、VFK1178(Hex Driver)

1. Play back the tape and adjust **screw(A)** for adjustment of tilt of A/C Head so that the tape path has lower limit without curl at T3 post.

2. To adjustment, loosen the screw (G) and make curl on tape at lower flange of T3 post by screw (A). And tighten screw (A) accordingly for find the point of curl disappeared. After finish adjustment for screw (A), tighten the screw (G) is tightened with 1.0Kg/cm of torque.

(NOTE)

1. In case of turn clockwise screw (A).
   → Tape goes up at T3 post.
   In case of turn counter-clockwise screw (A).
   → Tape goes down at T3 post.

2. When screw adjustment finished, with each adjustment screw on A/C Head should be finished tighten direction. And confirm that the screw does not loosen.

3. Adjust and confirmation should be performed alternately with each A/C head adjustment(Azimuth and Height).
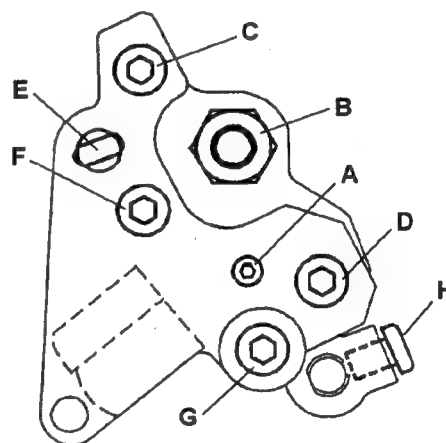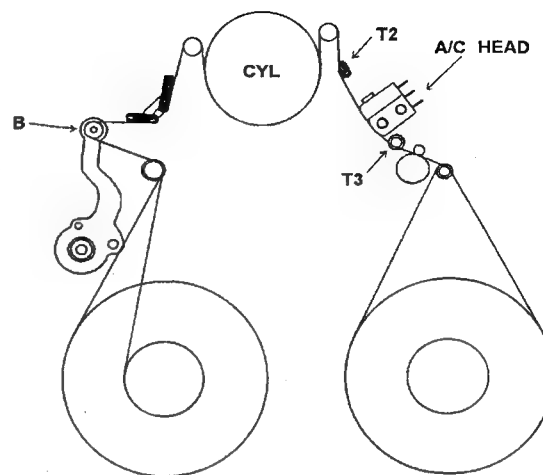
5-17. A/C Head Height adjustment

BOARD	RF
SPEC	CTL Output (C1,C2≧160mV)
TEST POINT	TP5903(TP903 on RF Board)
ADJUSTMENT	SCREW B and H (A/C Head)
MODE	PLAY
TAPE	**NTSC:** VFM3580KM (14 to 22 min) **PAL:** VFM3680KM (14 to 22 min)
M.EQ	Oscilloscope
TOOL	VFK1150(Nut Driver) VFK1190(Hex Wrench)

1. Observe the CTL output (**TP903**) on the Servo board.
2. Press and Lift up to A/C Head lightly as indicated as figure position, then confirm that the **CTL** output level is **decreased**.
3. If increases CTL output, when press the A/C Head. Loosen the **screw H** and adjust the **screw B counterclockwise** until CTL output is maximized.
4. If increases CTL output, when lift up the A/C Head. Loosen the **screw H** and adjust the **screw B clockwise** until CTL output is maximized.
5. After tightening the **screw H(2.0kg)**, confirm the level again.

< NOTE >
1. Adjust alternately with other A/C head adjustments(Azimuth, Height).
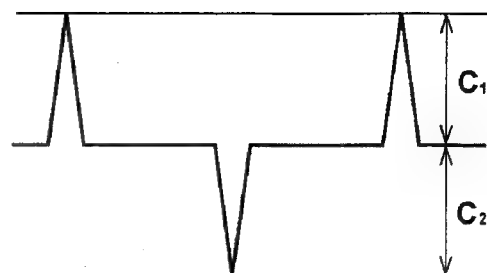
Upper edge of CUE R/P Head
(Upper edge of white portion)
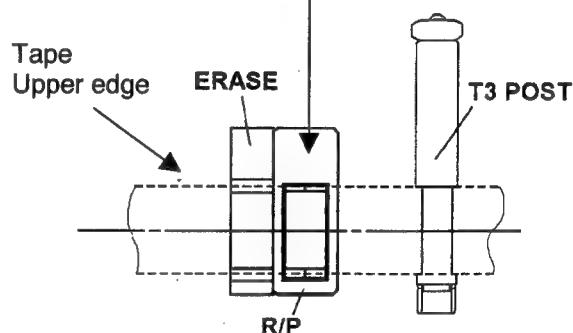
A/C HEAD HEIGHT
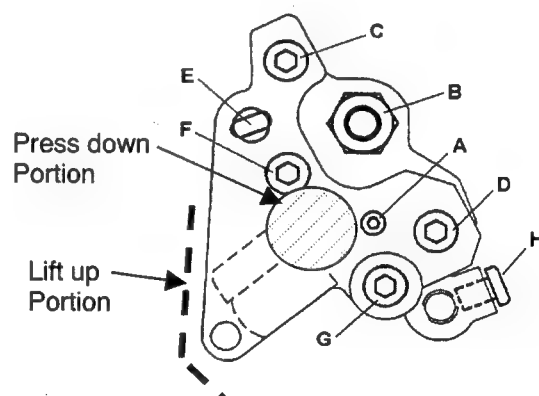
5-18. A/C Head Azimuth Adjustment

BOARD	SERVO
SPEC	CTL Output:C1,C2 = C1 max, C2 max
TEST POINT	TP5903(TP903 on RF Board)
ADJUSTMENT	SCREW F (A/C Head)
MODE	PLAY
TAPE	**NTSC:** VFM3580KM (14 to 22 min) **PAL:** VFM3680KM (14 to 22 min)
M.EQ	Oscilloscope
TOOL	VFK1148(Hex Driver)

1. Observe the CTL output (TP903) on the Servo Board.
2. To adjustment, loosen the screw (G) and adjust screw (F) so that the CTL output become maximum.
3. Tighten screw (G) with 1.0Kg torque.

< NOTE >

1. Adjust alternately with other A/C head adjustments(Azimuth, Height).
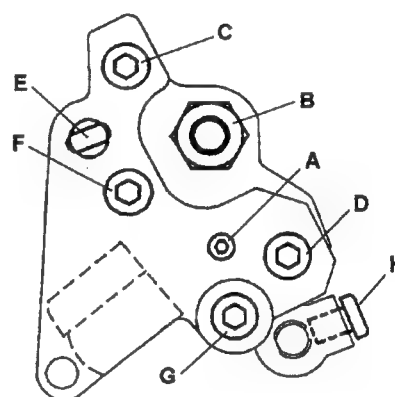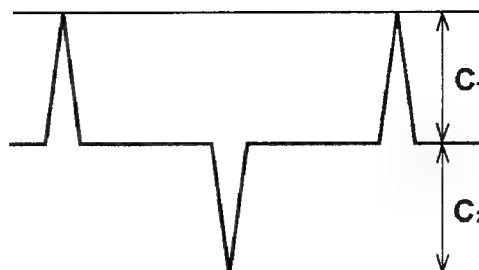
5-19. A/C Head Tilt Confirmation

SPEC	$A/A_{max} \geqq 0.8$
TEST POINT	TP40701 (TP701on AUDIO Board)
ADJUSTMENT	SCREW A and G (A/C Head)
MODE	PLAY
TAPE	NTSC:VFM3580KM (14 to 22 min)
	PAL: VFM3680KM (14 to 22 min)
M.EQ	Oscilloscope
TOOL	VFK1178、VFK1148(Hex Driver)

1. Playback the Alignment tape.
2. Confirm that the **screw G** and **H** are not loosened.
3. Push the tension arm follow the arrow (B) direction as shown in figure as range of T2 post does not move. And confirm that the CUE output level is within specification.
4. If out of specification, loosen the **screw G** and adjust the **screw A**, then tighten the **screw G** with **1.0kg** torque.
5. The final touch of the adjustment must be turned clockwise. After this adjustment, confirm that the screw A is not loosened.
6. If adjust the screw A, Confirm that the tape pass condition follow Post Limit Confirmation procedure (item 1-14).
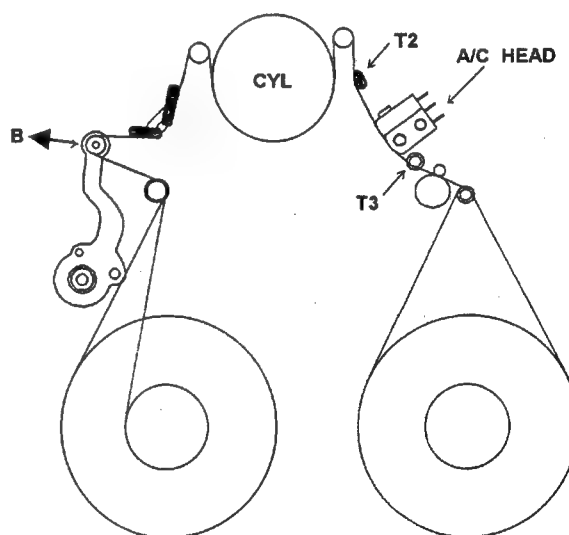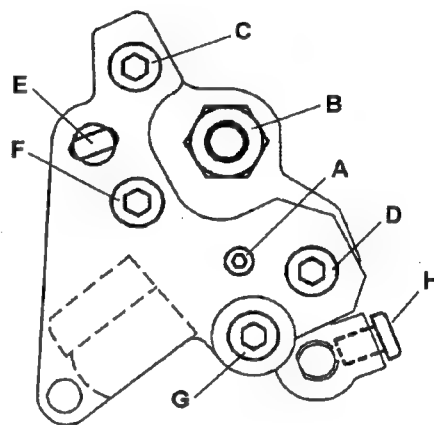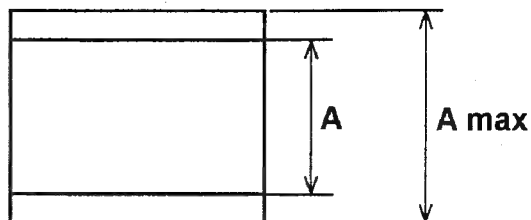
5-20. A/C Head Height Confirmation

SPEC	A≧0.95×Amax, C1、C2 ≧ 160mV
TEST POINT	TP40701(TP701 on AUDIO Board) TP5903(TP903 on RF Board)
ADJUSTMENT	SCREW B and H(A/C Head)
MODE	PLAY
TAPE	**NTSC:** VFM3580KM (14 to 22 min) **PAL:** VFM3680KM (14 to 22 min)
M.EQ	Oscilloscope
TOOL	VFK1150(Nut Driver) VFK1190(Hex Wrench)

1. Playback the Alignment tape.
2. Press and Lift up to A/C Head lightly as indicated as figure position, then confirm that the CUE output level at TP701 does not **increased**.
3. If increases CUE output, A/C Head Height adjustment performed. And also confirm that the CTL output level.
4. If adjust the height of A/C Head, Azimuth also changed. Therefore adjust and confirm alternately Height and Azimuth of A/C Head.
5. After screw (H) is tightened, height and tilt of A/C Head are changed. Therefore confirmation of specification must be done after tightening the screw (H).
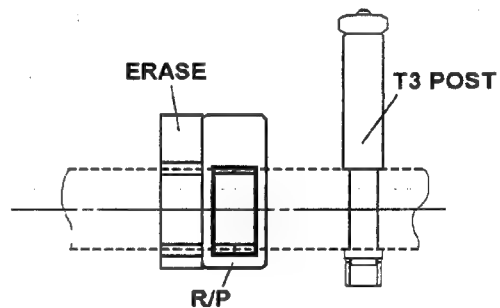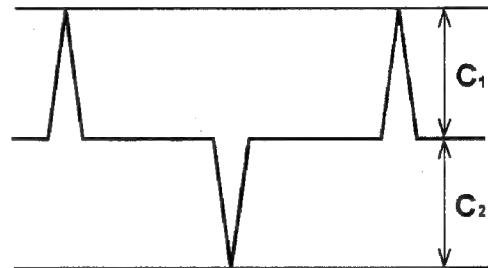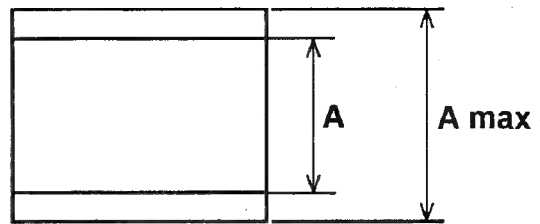
A/C HEAD HEIGHT
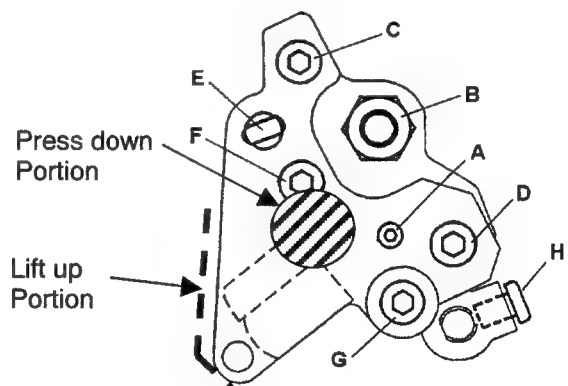
5-21. A/C Head Azimuth and X-value Adjustment.

SPEC.	As shown in below figure. 250us≦t1、t2≦+250us	TEST POINT	TP5251:RP ENV (TP251 on RF Board.) TP5759:RP HSW (TP759 on RF Board.) TP40701:CUE (TP701 on AUDIO Board.) TP5903:CTL (TP903 on RF Board.)
ADJUSTMENT	A/C Head each screws		
MODE	PLAY (SERVO ADJUST: A09:RP LINEAR)	M.EQ	Oscilloscope
TAPE	NTSC: VFM3582KM (X-value) PAL: VFM3682KM (X-value)	TOOL	VFK0357(Eccentric Screwdriver)

1. Open the Servo Adjust menu on Service menu and set the item "B05:PB HEAD" to "RP"(counter displayed 00001).
2. Open the Service menu and select the item "A09:RP LINEAR" on Servo Adjust menu for RP Head ATF Playback.
3. Playback the X-value Alignment tape.
4. Confirm that the phase of CUE and CTL are within specification against RP HSW pulse trigger. If not perform the X-value adjustment follow the below procedure.
5. Adjust A/C Head Azimuth (refer to Azimuth adjustment procedure) so that the CTL and Lack part of CUE(t2) is match in the phase.
6. Confirm the lack track of envelope, and select the HSW correspond with it (The lack track is correspond HSW high with L ch).
7. Adjust X-value so that the reference of HSW and CTL trigger (CTL falling edge is the reference: refer to below figure) are match in the phase(t1). To adjust X-value, loosen the screw C and D, adjust the hole E by VFK0357. After adjustment tighten the screw C and D with 2.5Kg torque. At this time adjust the phase simultaneously with Azimuth so that the CTL and CUE phase is kept.
8. Hit the top plate (portion L as shown in below figure) of A/C Head lightly by a pointed end of Eccentric driver , then confirm the phase is not shifted finally.
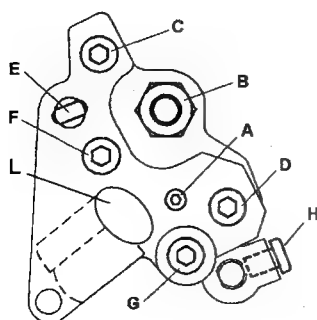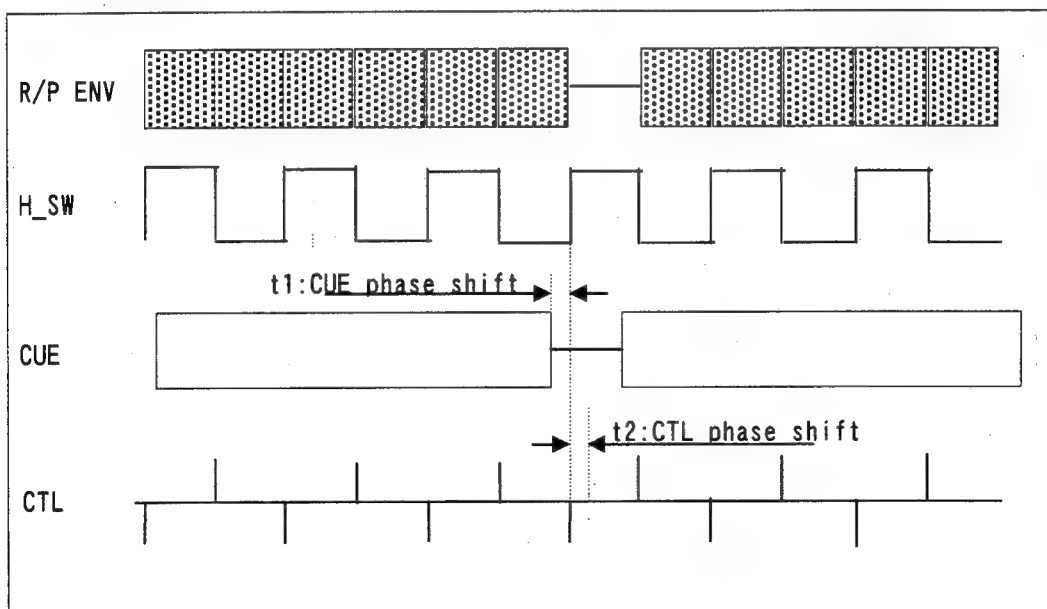
5-22. REV Tape Pass Confirmation and Adjustment (T4 post height adjustment)

SPEC.	C1, C2≧Cp1, Cp2×0.75 Lower limit at T3 post on REV mode	TAPE	NTSC: VFM3580KM PAL: VFM3680KM
TEST POINT	TP5903(TP903 on RF Board.)	M.EQ	Oscilloscope
ADJUSTMENT	T4 post height	TOOL	VFK1151(Nut Driver)
MODE	REV×1		

1. Place unit into REV mode, and confirm the post limit and CTL signal are in the specification. IF not, adjust T4 post follow the below procedure.
2. Turn the Nut of T4 post clockwise or counterclockwise follow the tape limit condition at T3 post. The maximum rotation angle is 90 degree.
3. Place unit into REV X1 mode and confirm the CTL output level is become more than 75% on play mode. Confirm the tape pass limit become lower limit at T3 post and the tape does not have curl at T3 and T4 post.
4. However out of specification, adjust T4 post height follow the Post Height Pre-adjustment procedure.

T4 Nut adjustment direction

Direction of adjustment nut of T4 post	CTL level on REV mode	Lower limit at T3 post On REV mode
Tighten direction	Increase	Tape touch to strong
Loosen direction	Decrease	Tape touch to weak

Post Limit

Post Name	Tape limit					
	A	B	C	D	E	F
T3 Post	✕	✕	◯	✕	✕	✕
T4 Post	◯	◯	◯	✕	✕	✕

A: Upper   B: FREE   C: LOWER   D: CURL   E: BEND   D: DROP

C1, C2 : REV×1
Cp1, Cp2 : PLAY×1
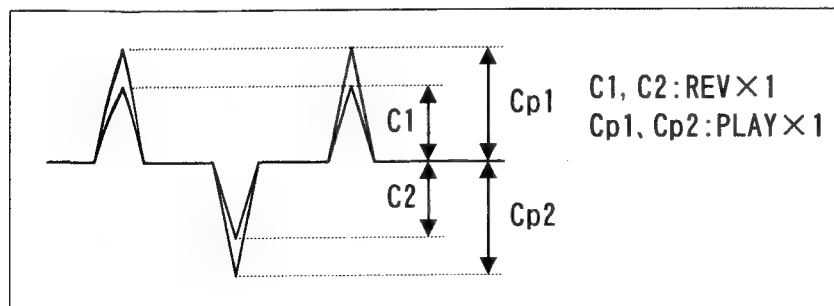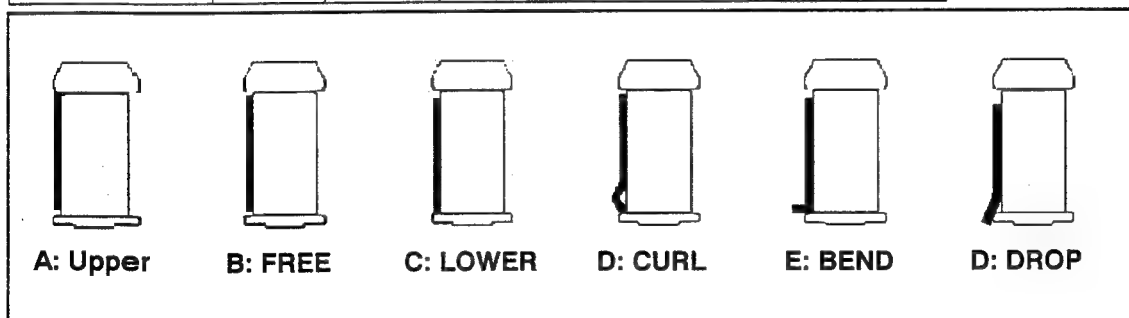
5-23. CTL Self Recording Level Confirmation

SPEC.	Refer to below table
TEST POINT	TP5903 (TP903 on RF Board)
MODE	REC and PLAY
TAPE	Blank tape
M.EQ	Oscilloscope

NOTE: This confirmation should be done after each screws of A/C Head are fixed.

1. Record the blank tape.
2. Playback the recorded portion and confirm the CTL level is within specification as shown as below table on PLAY and REV X1 mode.
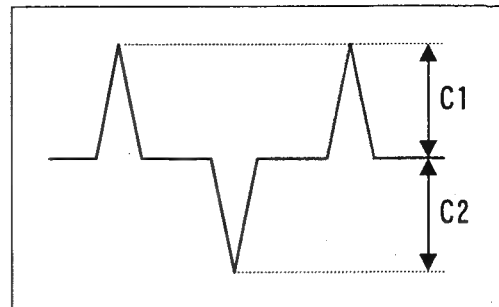
CTL Output Level C1,C2

PLAY	REV×1
C1,C2≧160mV	C1,C2≧120mV

1. PLAY NG → Re-confirm the A/C Head height adjustment.
2. REV NG → Re-confirm the T4 post adjustment.

CTL Output Level C1,C2

5-24. PLAY Tape Pass Limit Confirmation

SPEC.	Each Post limit shown in table
MODE	PLAY
TAPE	M cassette (MP tape) tape. Tape beginning and end portion

Post Name	Tape Limit (Refer the figure)						Adjustment	
	A	B	C	D	E	F		
S5 post	X	O	O	X	X	X	S4, S5 Post	Post Height Pre-Adj.
S4 post	X	X	O	X	X	X		
S1 post	O	X	X	X	X	X	S1 Post	Envelope waveform Adj.
T1 post	O	X	X	X	X	X	T1 Post	Envelope waveform Adj.
T3 post	X	X	O	X	X	X	A/C Head tilt	A/C Head tilt Adj.
T4 post	X	O	O	X	X	X	T4 Post	Post Height Pre-Adj

1. Place unit into PLAY mode and confirm the each post limits is within specification.

2. If out of specification, adjust the post height follow the each adjustment procedure (Refer to above table).

A: Upper   B: Free   C: Lower   D: Curl   E: Bend   F: Drop
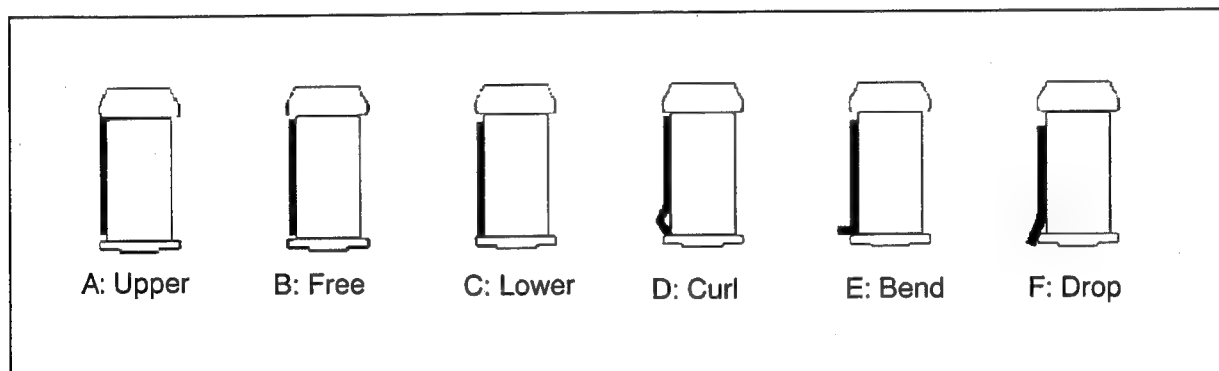
5-25. Confirmation of Envelope on REV,REW and FF mode.

SPEC.	V/Vmax $\geq$ 0.9
TEST POINT	TP5251:R/P ENV (TP251 on RF Board.) (RP ENV is selected by Service menu) TP5759:TRIG(TP759 on RF Board)
MODE	REV、REW、FF
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Oscilloscope

1. Open the Servo Adjust menu on Service menu and set the item "B05:PB HEAD" to "RP"(counter displayed 00001).
2. Confirm that the Envelope waveform becomes in the specification on REV,REW and FF mode as refer to figure and below.
   · Waveform must be Diamond Style.
   · All the peak level must be more than 90% of maximum level.
   V/Vmax $\geq$ 0.9
2. If out of spec, adjust S4 post height.
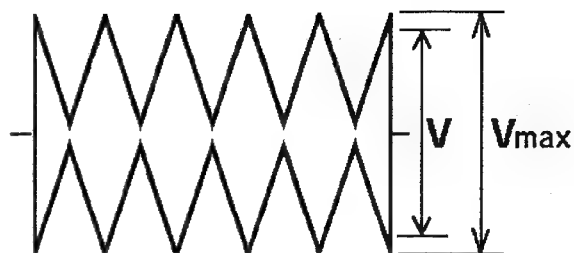
O K

N G
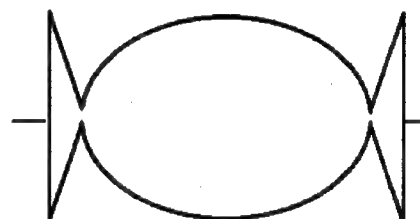
5-26. Confirmation of Play Start Envelope

TEST POINT	TP5251:R/P ENV (TP251 on RF Board)
	(RP ENV is selected by Service menu)
	TP5759:TRIG(TP759 on RF Board)
MODE	REW/REV → PLAY
	Loading completion → PLAY
	FF → PLAY
TAPE	L cassette(123min, Recorded tape)
	Tape beginning portion
M.EQ	Oscilloscope

Note: This adjustment must be done after Envelope Waveform Adjustment.

1. Open the Servo Adjust menu on Service menu and set the item "B05:PB HEAD" to "RP"(counter displayed 00001).

2. Confirm that the envelope appears immediately, when the mode is changed from REW to PLAY, REV to PLAY, FF to PLAY, and Lording to PLAY mode.

3. If out of spec, adjust S4 post height.

O K
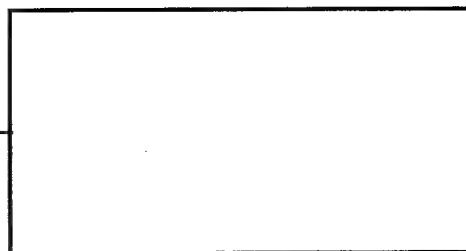
N G
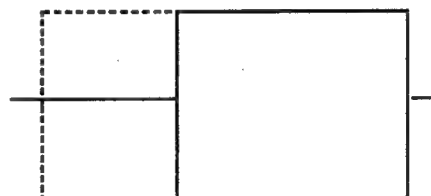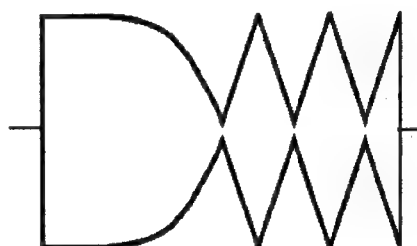
5-27. Tape Pass Limit Confirmation

SPEC	Each Post limit shown in table.
MODE	REV
TAPE	M cassette (MP tape) tape. Tape beginning and end portion

Post Name	Tape Limit(Refer to figure)					
	A	B	C	D	E	F
S5 Post	◯	◯	◯	X	X	X
S4(Tension) Post	X	◯	◯	X	X	X
S1 Post	◯	X	X	X	X	X
T1 Post	◯	◯	◯	X	X	X
T3 Post	X	X	◯	X	X	X
T4 Post	X	X	◯	X	X	X

1. Place unit into REV mode and confirm the each post limits is within specification.

2. If out of specification, adjust the post height follow the each adjustment procedure (Refer to above table).

A: Upper   B: Free   C: Lower   D: Curl   E: Bend   F: Drop
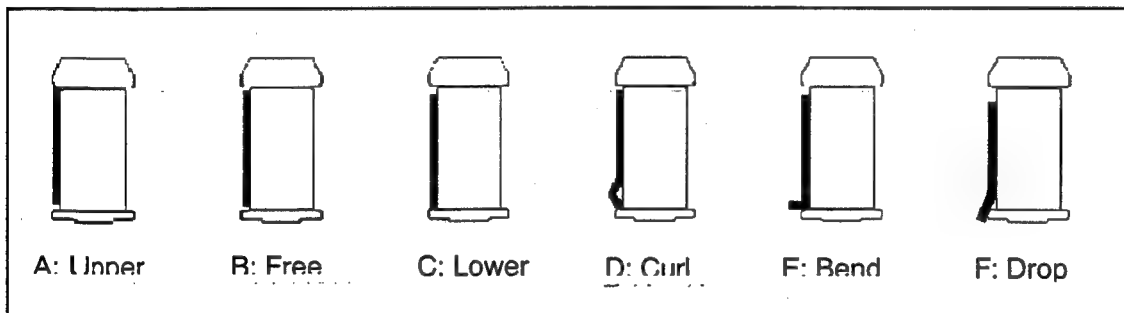
5-28. FF、REW Tape Pass Limit Confirmation

SPEC.	Each Post limit shown in table.
MODE	FF,REW
TAPE	M cassette (MP tape) tape. Tape beginning and end portion

Post Name	Tape Limit(Refer to figurte)					
	A	B	C	D	E	F
S5 Post	O	O	O	X	X	X
S4(Tension) Post	X	O	O	X	X	X
S1 Post	O	X	X	X	X	X
T1 Post	O	O	O	X	X	X
T3 Post	O	O	O	X	X	X
T4 Post	O	O	O	X	X	X

1. Place unit into FF and REV mode and confirm the each post limits is within specification.
2. If out of specification, adjust the post height follow the each adjustment procedure (Refer to above table).

A: Upper   B: Free   C: Lower   D: Curl   E: Bend   F: Drop
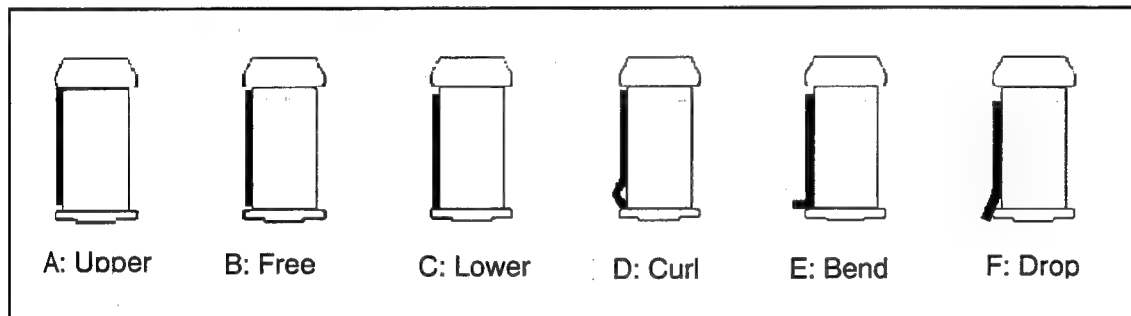
5-29. Screw Lock Tight of A/C Head and T3、T4 Post

[Screw Lock Tight of A/C Head]

	SCREW A	OTHER SCREW
Lock Tight Grew Quantity	1/3 of the screw	1/3 of the screw

1. Fix the screw by the Lock Tight Grew after adjustment..

2. Before adjustment melt the Grew.

(A/C Head)
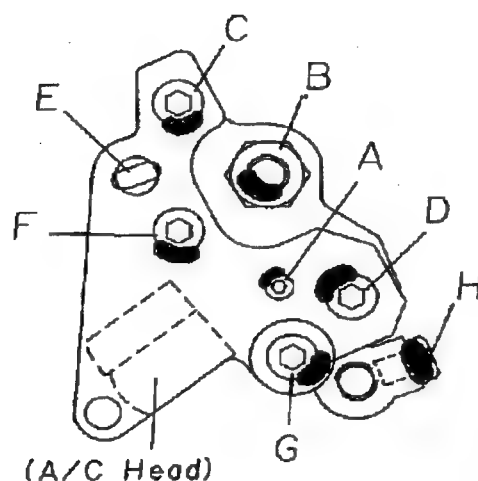
[Screw Lock Tight of T3 and T4 Post]

	T3 Post	T4 Post
Lock tight grew quantity	1/4 of the screw	1/4 of the screw

1. After adjustment, attach the lock tight grew at the Nylon nut..

2. Before adjustment, melt the Grew.

Nylon Nut

Lock Tight

T4 Post
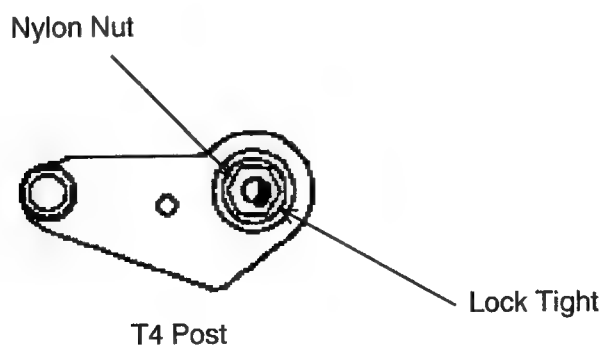
5-30. PG SHIFTER Adjustment

SPEC.	T1, T2 = 126.4 μ sec $\pm$ 2 μ sec.
MODE	PLAY
TEST POINT	TP5905: SPA (TP905 on RF Board) TP5759: R/P HSW (TP759 on RF Board) TP5251: R/P ENV (TP251 on RF Board)
ADJUSTMENT	A06:PG SFTR RISE. A07:PG SFTR FALL (SERVO ADJUST)
M.EQ	Oscilloscope
TAPE	**NTSC:** VFM3580KM **PAL:** VFM3680KM

1. Open the SERVO ADJUST menu on the Service menu and select the item " A06:PG SFTR RISE ".
2. Insert the Alignment tape and press [END]+[PLAY] button for unit place in playback mode.
3. After light up the SERVO indicator, keep press [BIGIN] until right side numerical value of Service menu "A06:PG SFTR RISE" once change to 0000 and next changes to new numerical value.
4. Press [UP] and select "A07 PG SFTR FALL".
5. Keep press [BIGIN] until right side numerical value of Service menu "A07:PG SFTR FALL" once change to 0000 and next changes to new numerical value.
6. Connect the scope to,TP905 and TP251 and TP759. Trigger the scope by TP759. Then it is displayed as shown in figure.
7. Confirm that the period of T1 and T2 in specification (126.4 μ sec $\pm$ 2 μ sec).
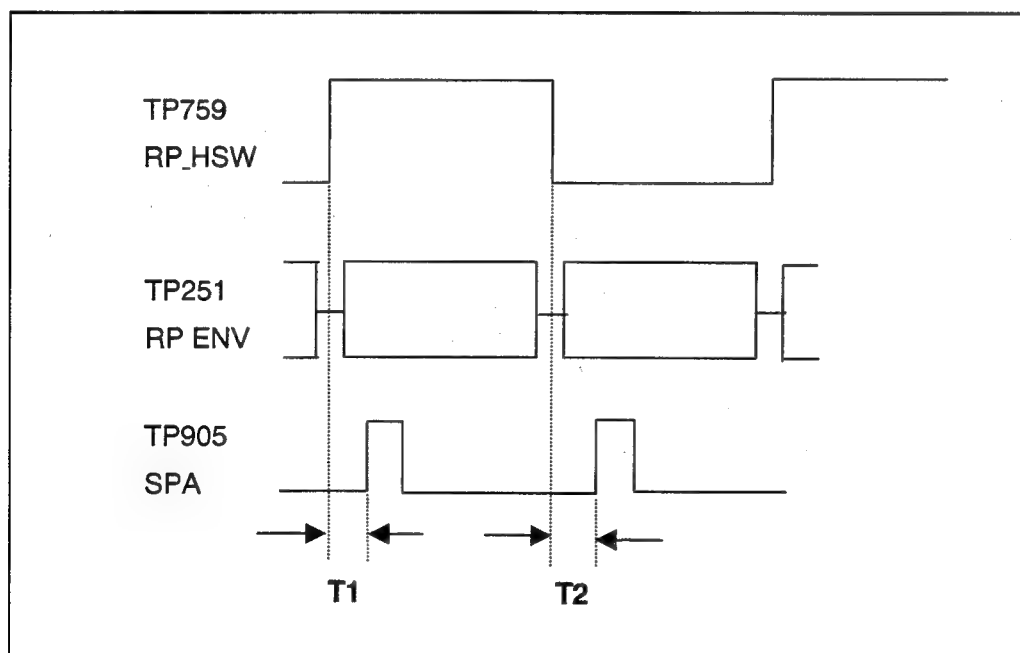
5-31. LISTA Adjustment Procedure.

(START)

LISTA Connection and Boot up

LISTA Sensitivity Adjustment

LISTA Sensitivity Detection

LISTA Linearity Adjustment

LISTA Waving Measurement

(END)
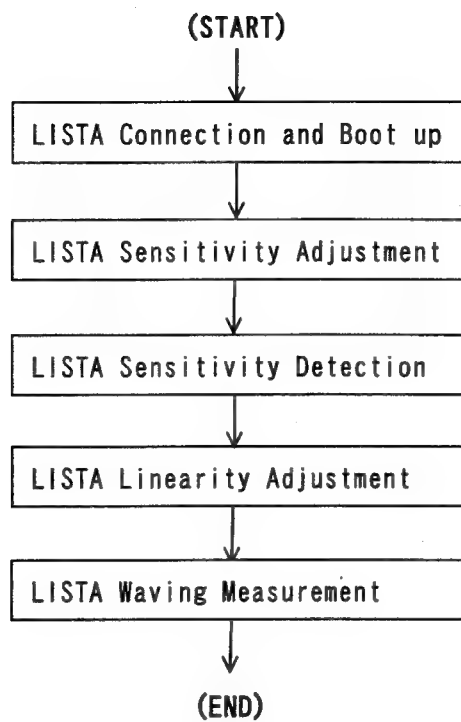
5-32. LISTA Connection and Boot Up

TEST POINT	TP5902: ATF ERR (TP902 on RF Board)
	TP5757: PB HSW (TP757 on RF Board)
	TP5759: R/P HSW (TP759 on RF Board)
	TG5751: GND (TP751 on RF Board)
M.EQ	P/C (AD Board should be installed),Oscilloscope
TAPE	**NTSC:** VFM3581KM (LISTA alignment tape)
	PAL: VFM3681KM (LISTA alignment tape)
TOOL	VFK1481(LISTA Software),VFK1186(LISTA Cable)

1. Connect the LISTA Cable to A/D board on PC.

2. Connect the Clips of LISTA Cable to test point on RF Board as follow as below.

①.ATF : TP902 (ATF error)

②.HSW : TP759 (HSW:RP) or TP757 (HSW:PB)

③.GND : TG751 (GND)

3. Boot up the LISTA software on DOS mode.

★ Install and Boot up.

All files on the floppy disk (VFK1481) copy to created directly on PC(**I.e.** C:¥LISTA).

Type "LISTA" and press ENTER Key, then boot up the LISTA software VFK1481

---

4. Select the item " DVCPRO " for format select on the menu.

5. Select the item " AJ-D750 " for selected model on the menu. (AJ-D250 is equivalent to AJ-D750)

6. After selected model, appeared alignment tape data on the screen for select the Serial number on the alignment tape. But if LISTA software have not resisted data of alignment tape, press the ESC key, then main menu is display on the screen. And select item " <4> Alignment Tape" for entry the data on the attachment sheet, which is enclosed of alignment tape.

7. After boot up LISTA software, select the item " DVCPRO " for format select on the menu.

8. Select the item " AJ-D750 " for selected model on the menu (AJ-D250 is equivalent to AJ-D750).

```
┌─────────────────────────────────────┐   ┌─────────────────────────────────────┐
│  ┌───────────────────────────────┐  │   │  ┌───────────────────────────────┐  │
│  │ Linearity monitor system of track │  │   │  │ Linearity monitor system of track │  │
│  │ using ATF error signal for DVCPRO │  │   │  │ using ATF error signal for DVCPRO │  │
│  │                               │  │   │  │                               │  │
│  │  — L I S T A   P R O  —       │  │   │  │  — L I S T A   P R O  —       │  │
│  │              [Service Use]    │  │   │  │              [Service Use]    │  │
│  │                               │  │   │  │     (for DVCPRO VTR)          │  │
│  └───────────────────────────────┘  │   │  └───────────────────────────────┘  │
│                                     │   │                                     │
│        <<< FORMAT SELECT >>>        │   │        <<< VTR SELECT >>>           │
│                                     │   │                                     │
│        ┌──────────────────┐         │   │      ┌──────────────────────┐       │
│        │ <1>  DVCPRO       │         │   │      │ <1> A J - D 7 5 0    │       │
│        └──────────────────┘         │   │      └──────────────────────┘       │
│          <2>  DVCPRO 4X              │   │        <2> A J - D 7 0 0            │
│                                     │   │                                     │
│          <3>  DVCPRO 50              │   │        <3> A J - D 2 0 0            │
│                                     │   │                                     │
│          <4>  Quit                  │   │                                     │
│                                     │   │                                     │
│  Move:Cursor key  Select:[ENTER] key│   │ Move:Cursor key  Select:[ENTER] key │
└─────────────────────────────────────┘   └─────────────────────────────────────┘
```

9. Next select the Serial number of the alignment tape on the screen. In case of LISTA software have not resisted data of alignment tape, press the ESC key, then main menu is display on the screen. And select item " <4> Alignment Tape " for entry the data on the attachment sheet, which is enclosed of alignment tape.

10. In case of LISTA software have resisted data of alignment tape, select the serial number of Alignment tape, then appear message "ok?(y/n)" on the screen. And press " Y " or " ENTER " key, then LISTA main menu is display on screen.

≪In case of Alignment tape resisted≫   ≪In case of Alignment tape does not resisted≫

```
┌────────────────────────────────────────────────────┐  ┌────────────────────────────────────────────────────┐
│ << Alignment Tape Select >>   Last Select [ 4 ]    │  │ << Alignment Tape Select >>   Last Select [ 4 ]    │
│   No. Serial No. PAL/NTSC Check Sum Type  Entry Date│  │   No. Serial No. PAL/NTSC Check Sum Type  Entry Date│
│ ===================================================│  │ ===================================================│
│   [ 1]  0000       NTSC     0.0   18 um  10-05-1995 │  │   [ 1]  0000       NTSC     0.0   18 um  10-05-1995 │
│   [ 2]  0000       PAL      0.0   18 um  02-20-1998 │  │   [ 2]  0000       PAL      0.0   18 um  02-20-1998 │
│   [ 3]  LRC-13     NTSC     0.0   10 um  06-01-1998 │  │                                                    │
│  ┌[ 4]  9804420    PAL      0.2   18 um  09-08-1998┐│ <== ok? (y/n)                                      │
│   [ 5]  Lrc-20     PAL      0.0   10 um  09-09-1998 │  │                                                    │
│   [ 6]  9806488    NTSC     0.1   18 um  12-14-1998 │  │                                                    │
│                                                    │  │                                                    │
│                                                    │  │                                                    │
│  Move:Cursor key  Select:[ENTER] key  Cancel:[ESC] key│  Move:Cursor key  Select:[ENTER] key  Cancel:[ESC] key│
└────────────────────────────────────────────────────┘  └────────────────────────────────────────────────────┘
```

< How to Entry the Attachment Data of Alignment Tape >

1. Select the item " <4> Alignment Tape " on the main menu of the LISTA software.

2. Select the item " <2> ENTRY " on the alignment tape menu.

3. After display the screen of " << Alignment tape Data Entry >> ", first input the Serial number follow the printed number on the tape label. And input the number "0" or "1" for select the PAL/NTSC. And after that for entry the tape type, in case of DVCPRO input to "0", in case of DV input to "1".

4. After select the Tape type, the frame for input the DATA and CHECK SUM appeared on the screen. Input the numerical value in numerical order on the data sheet, which are enclosed with alignment tape. If input the wrong number, appear the error message on the screen, then confirm that the data on the sheet.

5. After entry the data, select " <1> SELECT " on the Alignment Tape menu and select the serial number of the alignment tape.

<<Alignment Tape Data Entry>>   Serial No. 0596003(NTSC)   18um

[1]	− 0.1	[11]	0.7	[21]	− 0.4	[31]	− 0.4
[2]	0.1	[12]	1.0	[22]	− 0.2	[32]	− 0.6
[3]	0.0	[13]	0.7	[23]	− 0.7	[33]	− 0.3
[4]	0.2	[14]	0.5	[24]	− 0.6	[34]	− 0.2
[5]	0.6	[15]	0.2	[25]	− 0.7	[35]	− 0.1
[6]	0.5	[16]	− 0.5	[26]	− 0.3	[36]	− 0.3
[7]	0.7	[17]	− 0.3	[27]	− 0.4	[37]	− 0.1
[8]	0.9	[18]	− 0.3	[28]	− 0.4		
[9]	1.0	[19]	− 0.1	[29]	− 0.6	[CS]	− 0.6
[10]	0.8	[20]	− 0.6	[30]	− 0.3		

5-33. LISTA Sensitivity Adjustment (R/P Head)

SPEC.	Sensitivity:150±15 (mV/um)
MODE	PLAY
TEST POINT	TP5902: ATF ERR (TP902 on RF Board) TP5759: R/P HSW (TP759 on RF Board) TG5751: GND (TP751 on RF Board)
ADJUSTMENT	A08:RP GAIN (SERVO ADJUST)
TAPE	**NTSC:** VFM3581KM (LISTA) **PAL:** VFM3681KM (LISTA)

1. Connect the Test Point to clip of LISTA cable for ATF Error signal measurement.
2. Open the SERVO ADJUST menu on Service menu and select the EVR " A08:RP GAIN ".
3. Playback the LISTA alignment tape.
4. Select the "**<6> ATF Error Signal Monitor**" on the LISTA main menu and after appear the message " 1.2% Speed... " , press ENTER key, then sensitivity value as real time and waveform appear on the screen as shown as figure below.
5. Adjust EVR " A08:RP GAIN " so that the sensitivity value is within specification.
6. After finish this adjustment, press ESC key to exit to the main menu.

Adjust this value in specification

<<< ATF Error Signal Waveform >>>

Sens.Value : 150.74 mV/um

Sens.1 : 155.32 mV/um

Sens.2 : 146.16 mV/um

<<< Differential Data >>>

Cancel: Hit any key
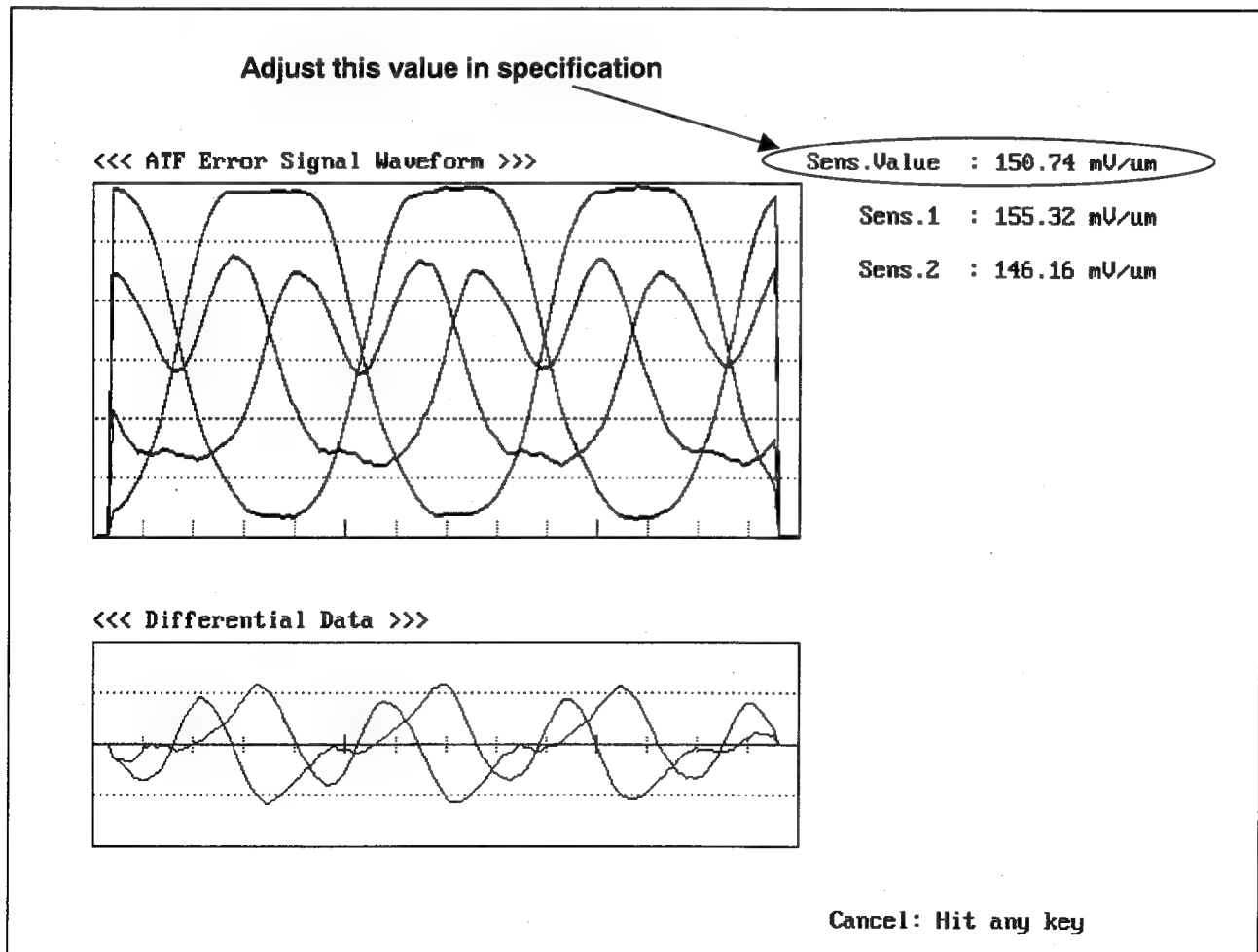
5-34. LISTA Sensitivity Detection (RP Head)

SPEC	Sensitivity:150±15 (mV/um)
MODE	PLAY
TEST POINT	TP5902: ATF ERR (TP902 on RF Board) TP5759: R/P HSW (TP759 on RF Board) TG5751: GND (TP751 on RF Board)
ADJUSTMENT	------
TAPE	**NTSC:** VFM3581KM (LISTA) **PAL:** VFM3681KM (LISTA)

1. Open the SERVO ADJUST menu on Service menu and select the EVR " A08:RP GAIN ".
2. Playback the LISTA alignment tape.
3. Select the " **<1>Sensitivity Measurement**" on the LISTA main menu and after appear the message " 1.2% that Speed... " , press ENTER key, then LISTA software start measurement of sensitivity value.
4. Confirm the sensitivity value is within specification, when the message << Sensitivity Measurement Finish>> and 「Sensitivity = numerical value」 are displayed on the screen.
5. If out of specification, repeat the steps 3 and 4.
6. If still out of specification, perform the "LISTA Sensitivity Adjustment again.

```
          ┌────────────────────────────────────────┐
          │  <<  Sensitivity Measurement Finish  >> │
          └────────────────────────────────────────┘


                                              Confirm this value


              Sensitivity      155.89 (mv/um)


              Sens.1           150.42 (mv/um)

              Sens.2           161.35 (mv/um)




           Please change VTR Tape Speed Mode

           (+1.2% Speed => Normal Speed)



                    <<< Hit any key >>>
```

5-35. LISTA Linearity Adjustment and Waving Measurement.

SPEC	Linearity: Less than 3um, Waving: Less than 1.5um
MODE	PLAY (EVR is select to " A09: RP LINEAR ")
TEST POINT	TP5902: ATF ERR (TP902 on RF Board) TP5759: R/P HSW (TP759 on RF Board) TG5751: GND (TP751 on RF Board)
ADJUSTMENT	S1 and T1 Post Height
TAPE	**NTSC:** VFM3581KM (LISTA) **PAL:** VFM3681KM (LISTA)

1. Open the SERVO ADJUST menu on Service menu and select the EVR " A09: RP LINEAR "
2. Playback the LISTA alignment tape.
3. Select the item " (2) Linearity Measurement " on the LISTA main menu and display the linearity waveform.
4. When the waveform as shown as below figure is displayed on the screen, press the " BS (back space) " key for display the waveform to center of scale on the screen. And adjust height of S1 and T1 post by Post Driver so that the linearity waveform is become flat as possible, and it should be in the specification.

★ Adjust linearity waveform in the red dot line on the screen.

```
                    Average : 16      1um/div




                                                    ▲   Adjust linearity
                                                    |   into this area
                                                    ▼




                    Centering         --> [BackSpace]
                    Peak Hold on/off  --> [SPACE]
                    Average( 64)      --> [ENTER]
                     Exit             --> [ESC]
```
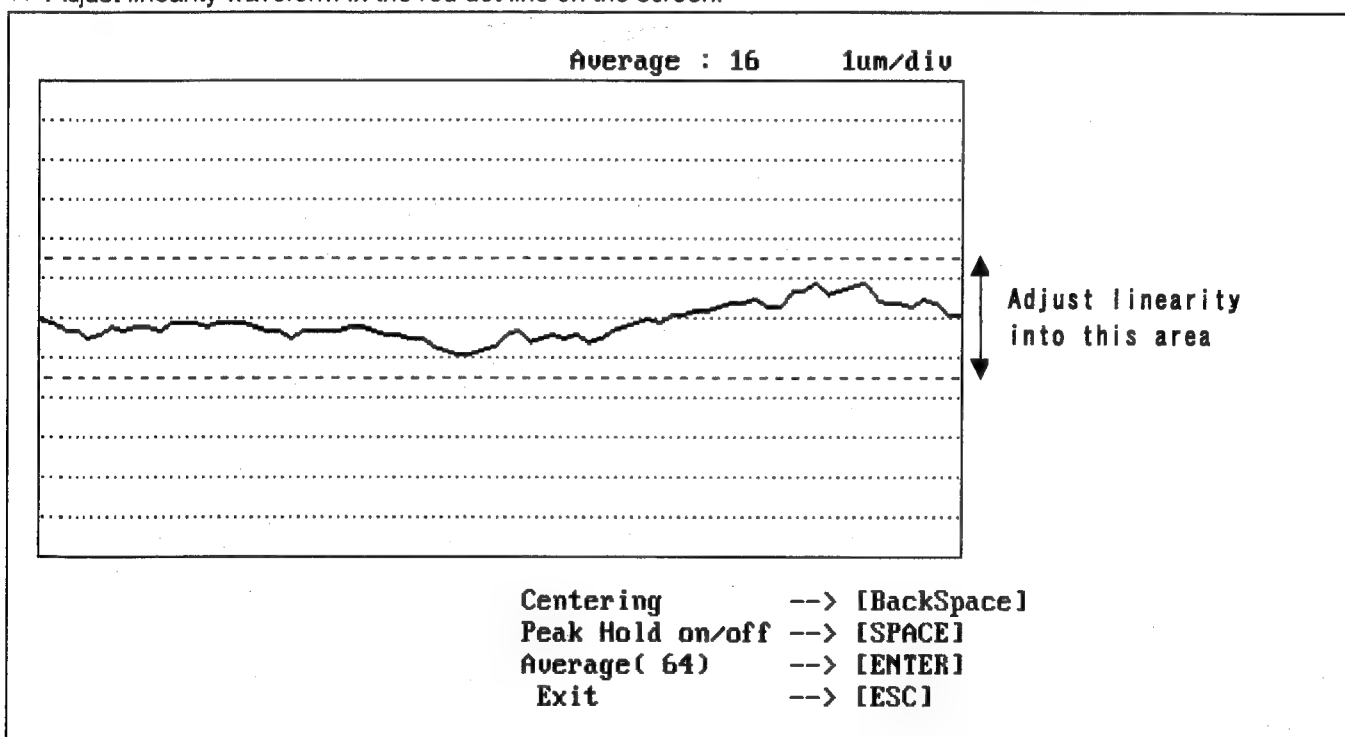
☆ **POINT:**

The part of left side of waveform(entrance side) is adjusted by height of S1 post and part of right side of waveform(exit side) is adjusted by height of T1 post.

Lower part of above waveform of figure is displayed lead on Cylinder.

When the post driver is remove from upper part of post, linearity waveform is changed.

After finish this adjustment, eject the tape and insert the tape again for confirm the shape of linearity waveform does not changed.

5. After finish the linearity adjustment, measure the numerical value of linearity and waving.

* [Waving Measurement]

1. Press "SPACE " key for make the Peak Hold during 30 seconds, when linearity is displayed.

2. After finish the Peak Hold, press "SHIFT" and "}" ,key simultaneously on the Key Board, then display the numerical values of 「Linearity」 and 「Waving」 on left lower portion of screen. And confirm the numerical values are in the specification. Also confirm the range of waving waveform is same quantity from entrance side to exit side. If the 「Linearity」 and 「Waving」 are out of specification and it caused by not enough limit of entrance or exit side of envelope, then adjust height of S1 and T1 post.

3. After this measurement is finished, press ESC key for return to main menu.

```
                                        Average : 64      1um/div


Confirm this Value

             Linearity: 1.7 um
             Waving   : 0.7 um            MENU  --> [ESC]
```
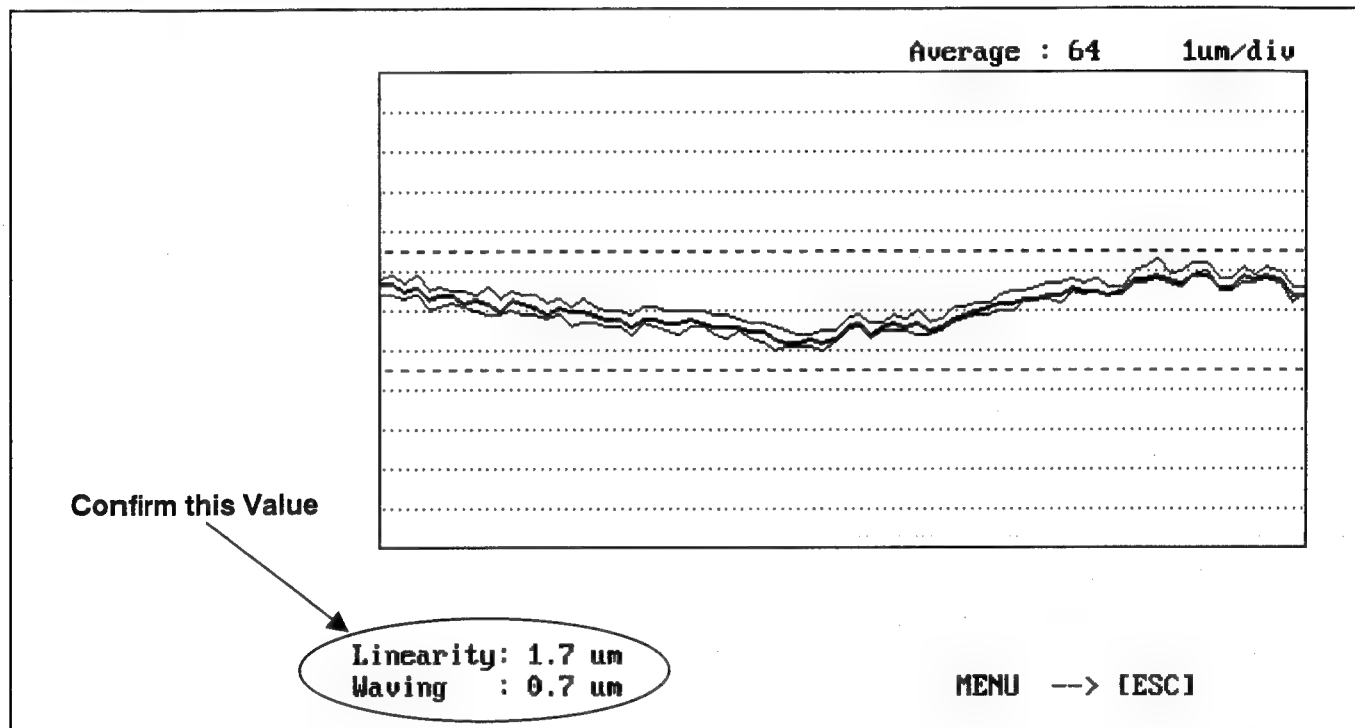
* NOTE: Saving of LISTA Data

The LISTA software can be saved linearity waveform and measurement value of linearity and waving as one file data to PC.

1. Basically this operation should be performed after linearity and waving measurement finished.

2. Select the item 「(3) Data Save/Load 」 on the LISTA main menu. And after open the menu select the item 「<1> Save」.

3. The linearity waveform as Peak Hold displayed on the screen. And after appeared message "File Name?" on the screen, entry the File Name and Comment. File Name must be in 8 characters, and comment is must be in 20 characters. As comment, entry the Serial Number, VTR Model Number and Head Rotation Hours etc, for use management of linearity data of each VTR.

4. After completion of saving, select the item 「<2> Load」 on the 「(3) Data Save/Load」 menu, then appear the saved File Name on the screen. And select it previous saved file for confirm the waveform and numerical value displayed correctly. By press "SHIFT" and "}" ,key simultaneously on the Key Board., then display the numerical values of 「Linearity」 and 「Waving」 on left lower portion of screen.

5-36. LISTA Sensitivity Adjustment (PB HEAD)

SPEC.	Sensitivity:150±15 (mV/um)
MODE	PLAY
TEST POINT	TP5902: ATF ERR (TP902 on RF Board) TP5757: PB HSW (TP757 on RF Board) TG5751: GND (TP751 on RF Board)
ADJUSTMENT	A10:PB GAIN
TAPE	**NTSC:** VFM3581KM (LISTA) **PAL:** VFM3681KM (LISTA)

1. Connect the Test Point to clip of LISTA cable for ATF Error signal measurement.
2. Open the SERVO ADJUST menu on Service menu and select the EVR " A10:PB GAIN ".
3. Playback the LISTA alignment tape.
4. Select the "<6> ATF Error Signal Monitor" on the LISTA main menu and after appear the message " 1.2% Speed... ", press ENTER key, then sensitivity value as real time and waveform appear on the screen as shown as figure below.
5. Adjust EVR " A10 PB GAIN " so that the sensitivity value is within specification.
6. After finish this adjustment, press ESC key to exit to the main menu.

Adjust this value in specification

<<< ATF Error Signal Waveform >>>

Sens.Value : 150.74 mV/um

Sens.1 : 155.32 mV/um

Sens.2 : 146.16 mV/um

<<< Differential Data >>>

Cancel: Hit any key
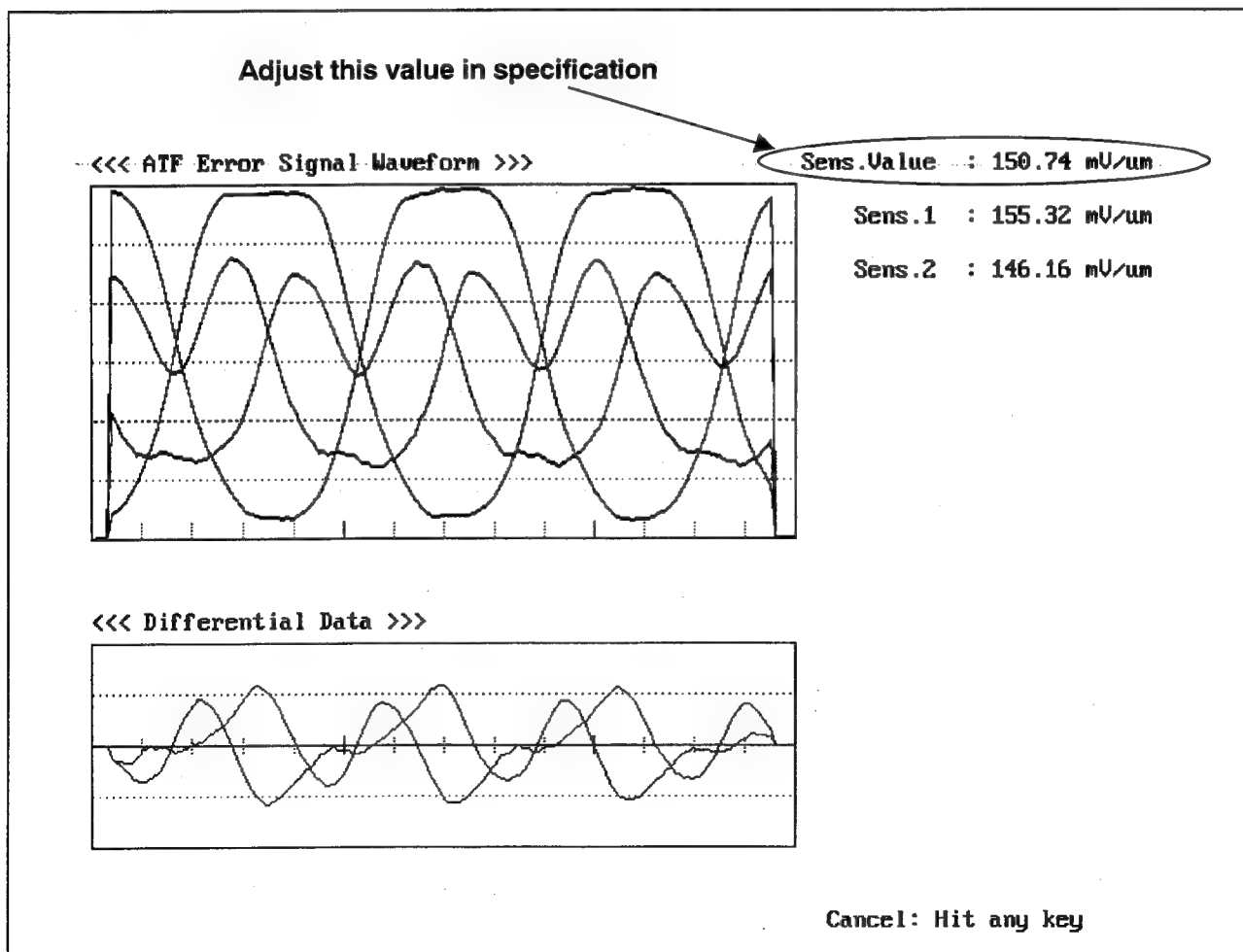
5-37. LISTA Sensitivity Adjustment (DV Compatibility)

SPEC.	Sensitivity:130±30 (mV/um)
MODE	PLAY
TEST POINT	TP5902: ATF ERR (TP902 on RF Board) TP5759: RP HSW (TP759 on RF Board) TG5751: GND (TP751 on RF Board)
ADJUSTMENT	A12:DV GAIN
TAPE	**NTSC:** VFM3581KM (LISTA) **PAL:** VFM3681KM (LISTA)

1. Connect the Test Point to clip of LISTA cable for ATF Error signal measurement.
2. Open the SERVO ADJUST menu on Service menu and select the EVR " A12:DV GAIN ".
3. Playback the LISTA alignment tape.
4. Select the "**<6> ATF Error Signal Monitor**" **on** the LISTA main menu and after appear the message " 1.2% Speed... " , press ENTER key, then sensitivity value as real time and waveform appear on the screen as shown as figure below.
5. Adjust EVR " A12 DV GAIN " so that the sensitivity value is within specification.
6. After finish this adjustment, press ESC key to exit to the main menu.

Adjust this value in this specification

```
<<< ATF Error Signal Waveform >>>          Sens.Value  : 128.54 mV/um

                                            Sens.1  : 142.99 mV/um

                                            Sens.2  : 114.10 mV/um



<<< Differential Data >>>




                                            Cancel: Hit any key
```
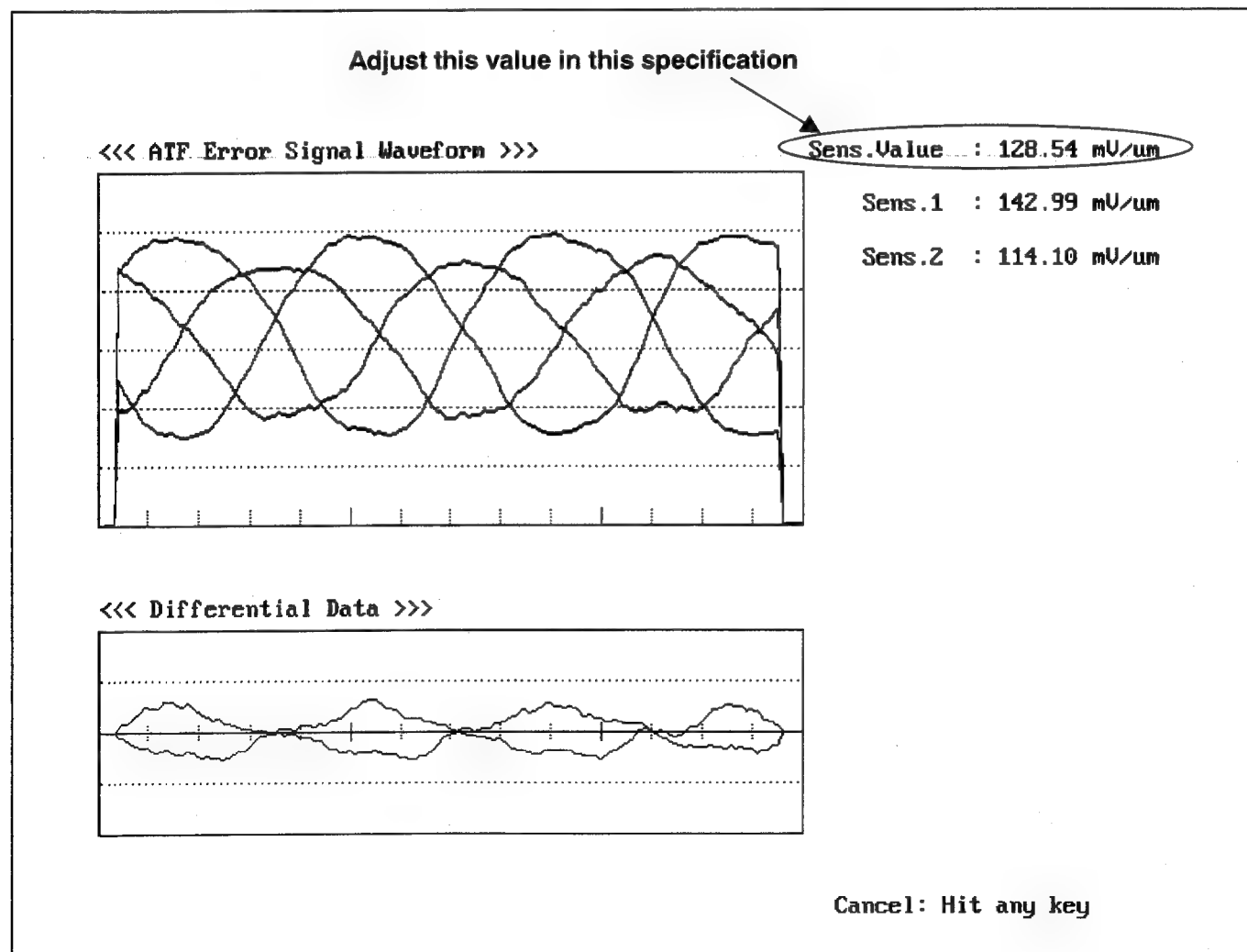
5-38. Self-Recording Playback Envelope Waveform Confirmation

SPEC	$V1/Vmax$, $V2/Vmax$, $V3/Vmax \geqq 0.8$
TEST POINT	TP5251:R/P ENV (TP251 on RF Board)
	(RP ENV is selected by Service menu)
	TP5759:TRIG (TP759 on RF Board)
ADJUSTMENT	S1 and T1 Post Height
MODE	PLAY
TAPE	Blank Tape
M.EQ	Oscilloscope
TOOL	VFK1149(Post Driver)

1. Record the color bar signal.
2. Open the MODE SELECT menu on Service menu and set the item "B05 PB HEAD" to "RP"(counter displayed 00001).
3. Play back the recorded portion and confirm that the envelope output is within specification
4. If out of specification, perform the Envelope Waveform and LISTA adjustment again.
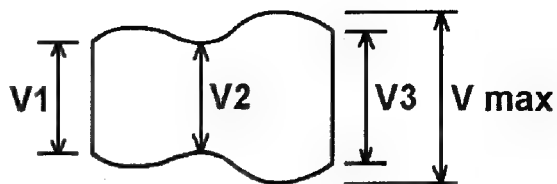
6. MAJOR MECHANISM PARTS REPLACEMENT AND ADJUSTMENT PROCEDURE

GENERAL

When mechanical parts are replaced, pay attention to the following notes.

1. Always turn power off before replacing any parts.
2. If any adjustment is necessary after the parts is replaced, perform the adjustment after replacement.
3. Use proper hard tools of fixtures.
4. Be sure to clean the parts after replacement, Also when the mechanical parts are replaced, follow the replacement procedure.

6-1. Cylinder Unit Replacement

(Removal)

1. Remove the Top Plate.
2. Remove the Bottom Plate Unit.
3. Remove the Front Loading Unit.
4. Disconnect the connector P2001,P2002,P2003 and P2004 on the Servo P.C.Board as shown in Figure 6-1-1.

Fig. 6-1-1

5. Disconnect the connector P41002 on AUDIO P.C.Board, which connected between A/C Head and AUDIO P.C.Board as shown in Figure 6-1-2.
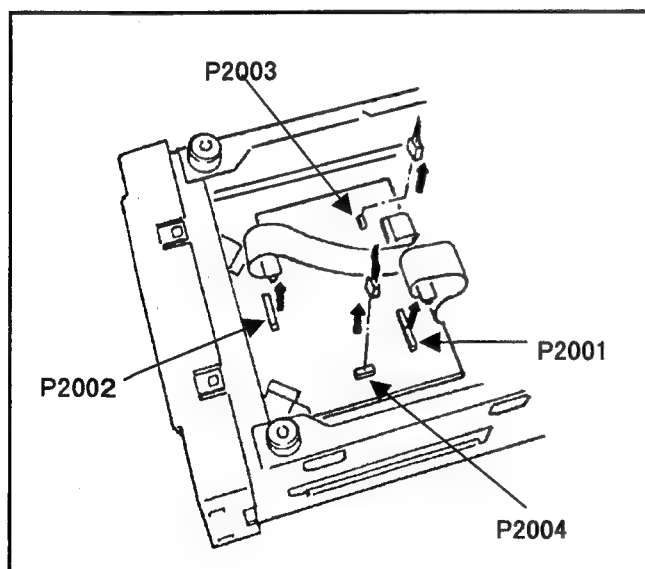
6. Disconnect the connector P5001 and P5201 on RF AMP P.C.Board, which are connected between the Cylinder Unit and the RF P.C.Board as shown in Figure 6-1-2.
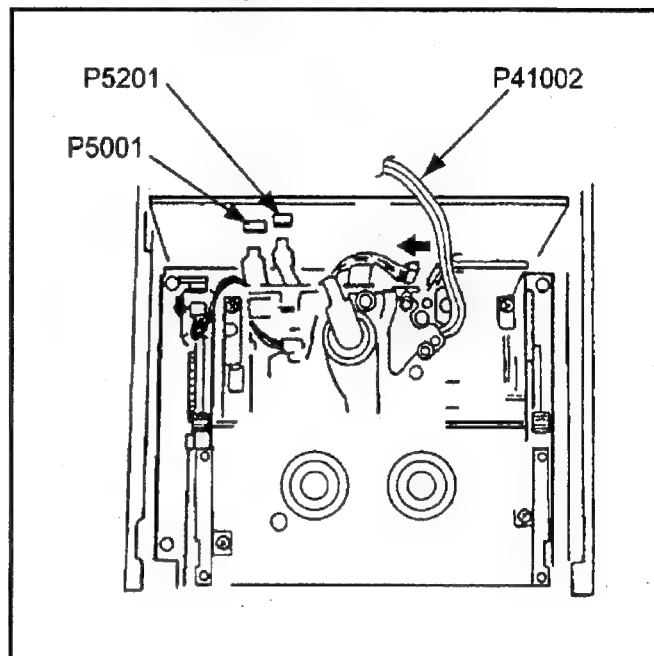
Fig. 6-1-2

Note: Be careful when remove the flexible cable from the connector for flexible cable. Please refer to how remove the connector as shown in Figure 6-1-3

Fig. 6-1-3

7. Unscrew the 4 screws on the Plate, which plate installed Mech Chassis Unit. And remove the Mech Chassis Unit with Plate from VTR as shown in Figure 6-1-4.
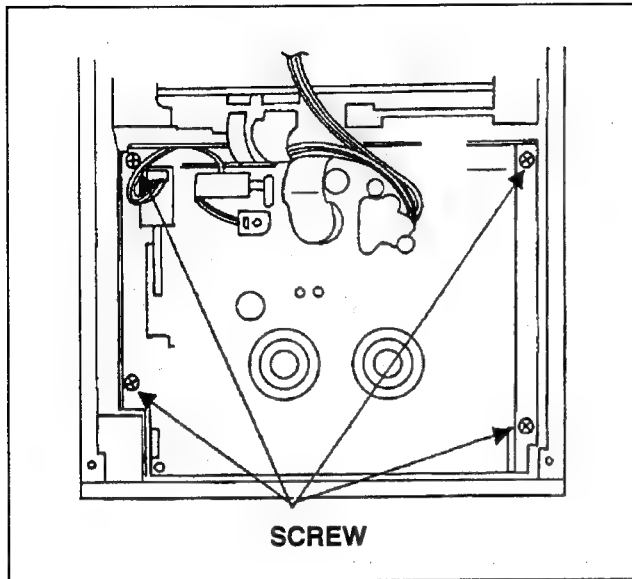
SCREW

Fig. 6-1-4

8. Unscrew the 2 screws and remove the T1 GUIDE (Refer to item 6-8-1)

9. Remove the Cleaning Arm Unit (Refer to item 6-8)

10. Disconnect the connector P2033 on the Servo P.C.Board. And remove the 3 screws which have spring from the Cylinder Unit as shown as Figure 6-1-5, then remove the Cylinder Unit without touching any mechanical parts as shown in Figure 6-1-6.

P2011

SCREW(A)   P2011 P2033
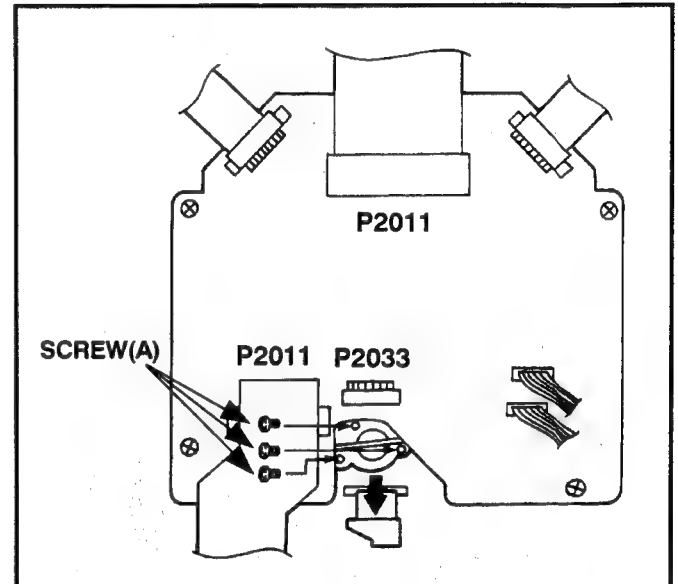
Fig. 6-1-5

NOTE: Never touch the cylinder by finger directly, when pull out the Cylinder Unit

(Installation)

1. Install the new Cylinder Unit on the previous steps in reverse order.
2. After installation of T1 Guide, T1 Guide position adjustment should be performed as follows.

Note: When install the Cylinder Unit, the pin on Mech chassis should be match to hole of Cylinder Unit as shown in Figure 6-1-6.

CYLINDER UNIT
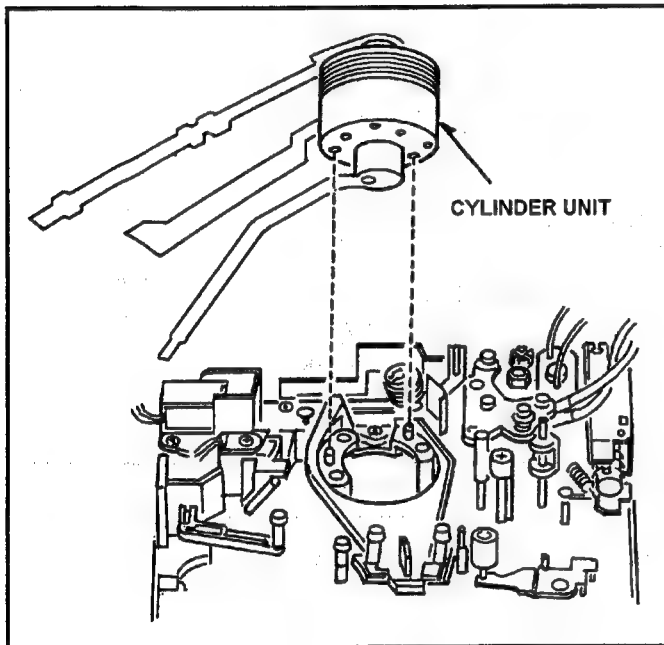
Fig. 6-1-6

[T1 Guide Position Adjustment]

1. Place the Loading completed position.

< How to making the Loading Condition >

1. Open the "Servo Adjust" menu in the "Service Menu".
2. Select the item "T TORQUE" and press the BIGIN button for making the loading condition and turn power to off.

2. Observe the clearance (B) between T1 Guide and T1 post as shown in Figure. And make sure that it is within 0.2 to 0.5mm.
3. If not, loosen the 2 screws (A) and adjust the position of T1 Guide by moving arrow direction (G ⇔ G) so that the clearance (B) is within specification. And tighten the 2 screws (A).

Removal of Cleaner Roller Unit
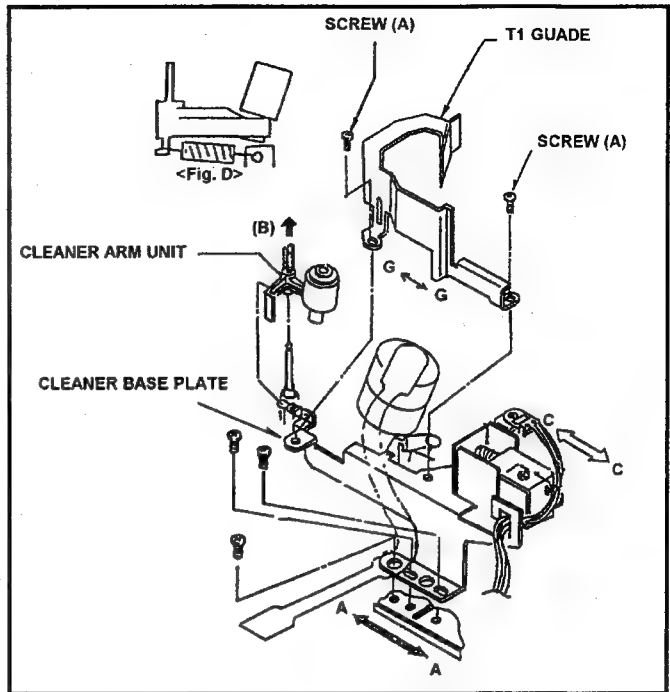
CLEARANCE (B)
0.2~0.5 mm
T1 GUIDE
T1 POST
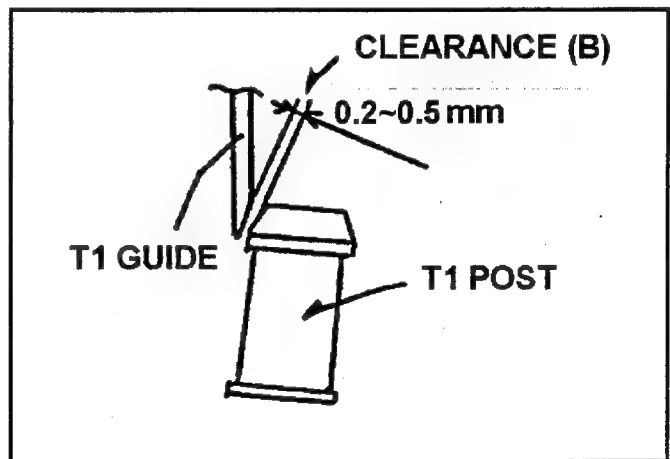
Adjust of T1 Guide

6-1-1. Adjustment Flow Chart After Cylinder Unit Replacement

1. After change the Cylinder Unit, please perform the following steps.

6-1-2. Adjustment Flow Chart after Cylinder Unit Replacement

1. Adjust following items after Cylinder Unit replacement.

Start (Mechanical Adj.: Section 3)

↓

5-11. Tension Confirmation

↓

5-13. Envelope Waveform Adjustment

↓

5-14. Post Limit Confirmation (PLAY)

↓

5-19. A/C Head Tilt Confirmation

↓

5-20. A/C Head Height Confirmation

↓

5-21. A/C Head Azimuth and X-value Adj.

↓

5-22. REV Tape pass confirmation and Adj.

↓

5-23. CTL Self-Recording Level Conf.

↓

5-24. Play Tape Pass Limit Confirmation

↓

5-27&28.Tape Pass Limit Conf.(REV/REW/FF)

↓

5-29. Screw Lock tight (A/C Head,T3 and T4 Post)

↓

5-30. PG Shifter Adjustment

↓

5-32. LISTA Connection and Boot up

↓

5-33. LISTA Sensitivity Adjustment (R/P Head)

↓

5-34. LISTA Sensitivity Detection (R/P Head)

↓

5-35. LISTA Linearity Adj. and Waving measurement

↓

5-36. LISTA Sensitivity Adjustment (PB Head).

↓

5-37. LISTA Sensitivity Adjustment (DV).

↓

5-38. Self-Recording and Playback ENV Conf.

↓

Start (Electrical Adj.: Section 4)

↓

EQ Adjustment

↓

REC CURR and FREQ. Adjustment

↓

Pre-EQ Adjustment

↓

CUE Rec and Play level Conf. And Adj.

↓

END

NOTE: EQ, Pre-EQ, REC CURR and REC FREQ adjustment can be executed Automatically by use AUTO software.

NOTE: For the PG Shifter Adjustment, release hand from the search button after changing the PG Shifter value at right of "PG SFTR" on the monitor. If the value is not changed for a long time, tape error or ITI envelope lack may be occurred.

6-2. A/C Head Replacement

6-2-1. Replacement

※ Tools required:
Nut Driver (5.5m/m)(VFK1150)
Hex Driver (VFK1148)
Hex Wrench (VFK1190)

(Removal)
1. Remove the Top Plate.
2. Loosen the hex screw (B) and remove the Nut (C). Hang off the Head Height Adjustment Spring and then remove the A/C Head Unit as shown in Figure 6-2-3.

Point: Memorized height of Nut (C) before remove the Nut (C),
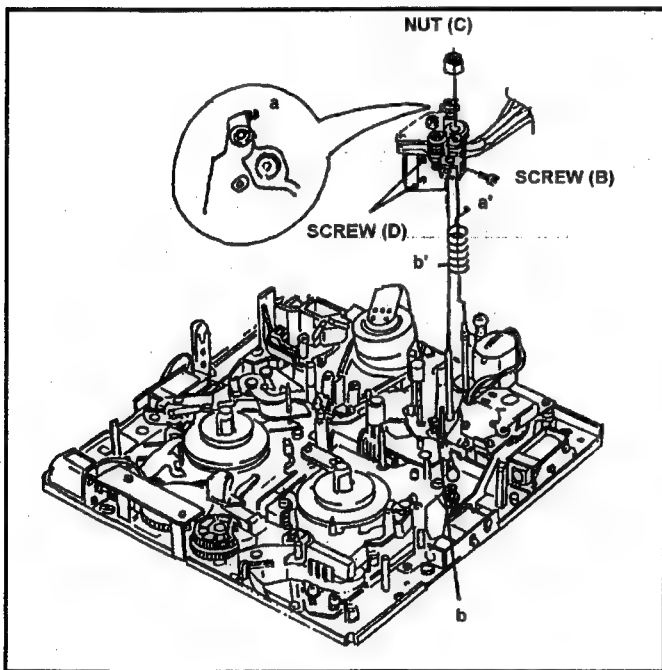
Fig. 6-2-3 Removal of A/C Head Unit

3. Remove the 2 screws (A) and disconnect the connector P4502 on the AUDIO and P2030 on the Servo P.C.Board, then remove the A/C Head from the A/C Head Plate.
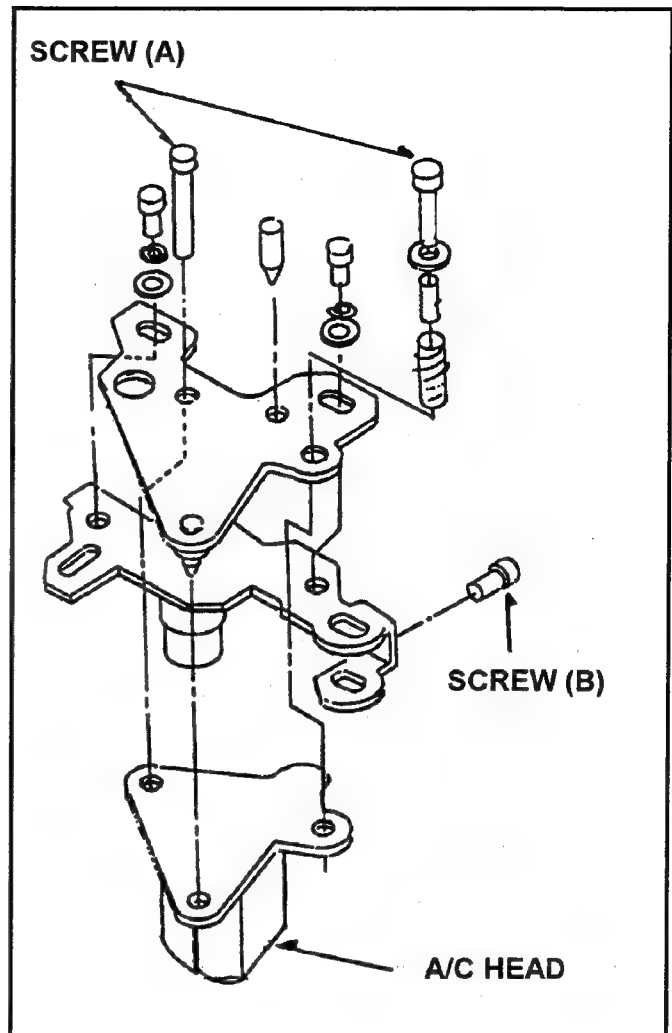
Fig. 6-2-1 Removal of A/C Head

4. Remove the Shield Cover by removing 2 screws (D) as shown in Figure 6-2-3.
5. Unsolder the lead wires (When unsolder the lead wires, do not unsolder all at the same time).

(Installation)
1. Remove the Shield Case from the New A/C Head and solder the lead wires to New A/C Head (Refer to Figure 6-2-2).
2. Reinstall the shield case to A/C Head.
3. Install the A/C Head to A/C Head Plate by tight 2 screws (A), then set to parallel the gap between A/C Head and A/C Head Plate.
4. Install the A/C Head Unit.
5. Hang on the Head Height Adjustment Spring and tighten the Nut (C).
6. Clean the surface of the A/C Head.

Note: After installation, Mechanical and Electrical adjustments should be performed and the hex screw (B) is kept loose until finish the A/C Head Height Adjustment.
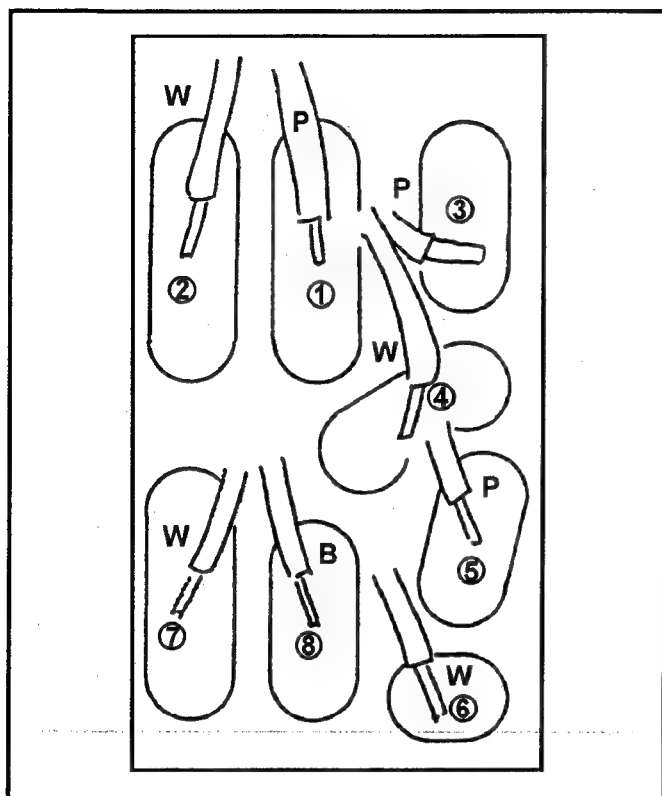
Fig. 6-2-2   Connection of A/C Head

A/C Head Side	Cable Color		Connector No.
1	PINK	YELLOW	
2	WHITE		
3	PINK	RED	P1
4	WHITE		
5	PINK	GREEN	
6	WHITE		
7	WHITE	YELLOW	P30
8	BLACK		

6-2-2. Adjustment Flowchart After A/C Head Adjustment

1.   After change the A/C Head, please perform the following steps.
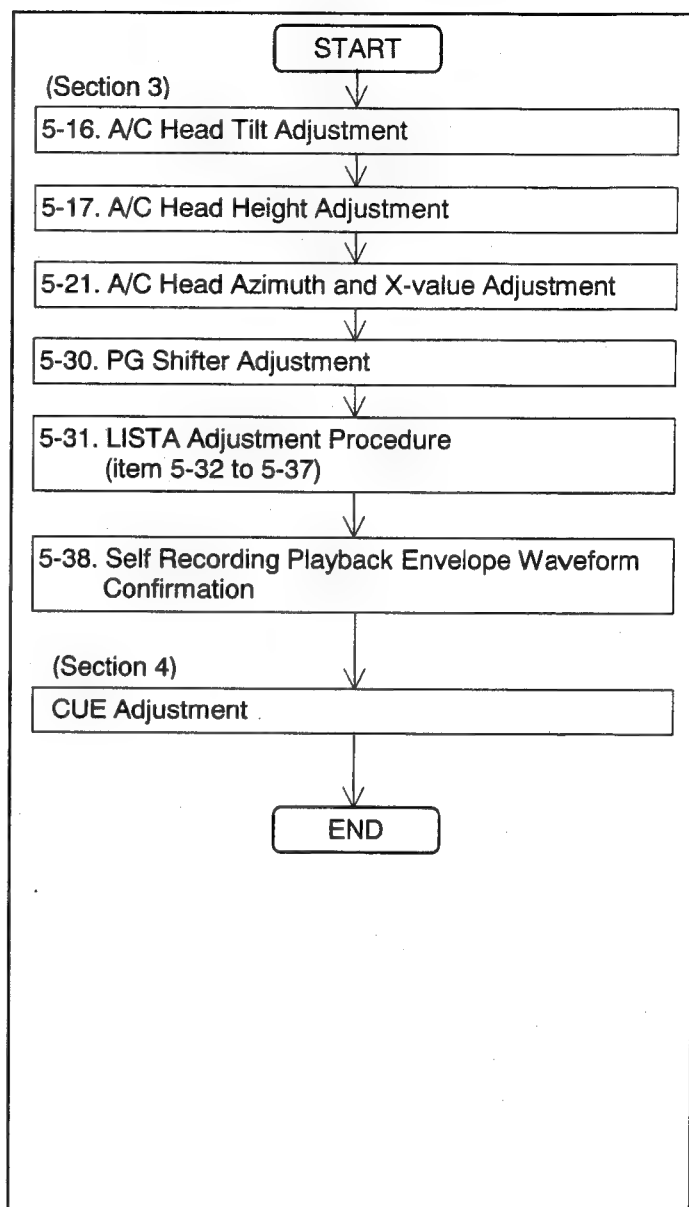
6-3. Supply and Take Up Reel Rotor Unit Replacement

(Removal)

1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit.
4. Disconnect the connector P2034 and P2035 on the Servo P.C.Board as shown in Figure 6-3-1.
5. Move the S1 post to loading direction by manual ejecting method until the screw (C) can removing position.
6. Confirm the supply and Take Up Brake are not release.
7. Press the iron core of M stopper solenoid to release the M stopper.
8. Remove the 4 screws (C), (D) and (E) as shown in Figure 6-3-1.
9. Remove the Supply and Take Up Reel Rotor Unit and Reel Outer Rail.

Note: Memorized the groove position of Reel Base, which inserted the pin of Drive Arm Unit.

(Installation)

1. Through in the Reel Outer Rail to New Supply and Take Up Reel Rotor Unit.
2. Hang on the Reel Rotor Unit to Reel Inner Rail and Install the Reel Rotor Unit then the pin of Drive Arm Unit should be matched with groove position of Reel Base as shown in Figure 6-3-3.
3. Install the 4 screws (C), (D) and (E).
4. Confirm that the Reel Rotor Unit moving smoothly on the Rail by hand.
5. Move the Reel Rotor Unit to front side by hand and then pull up the iron core of M stopper solenoid for operating M stopper.
6. Set the unloading condition by turn the Emergency shaft counter-clockwise.
7. Confirm that the Main Brake Torque. (Refer to item 5-3).
8. Connect the Flexible Cable to Connector P2034 and P2035 on the Servo P.C.Board.
9. Adjust the S Reel Torque Offset value (Refer to item 2-1 of section 4).
10. Adjust the T Reel Torque Offset value (Refer to item 2-2 of section 4).
11. Adjust the S Reel Motor Torque Offset value (Refer to item 2-3 of section 4).
12. Adjust the T Reel Motor Torque Offset value (Refer to item 2-4 of section 4).
13. Confirm that the Tension value on playback mode (Refer to item 5-11).
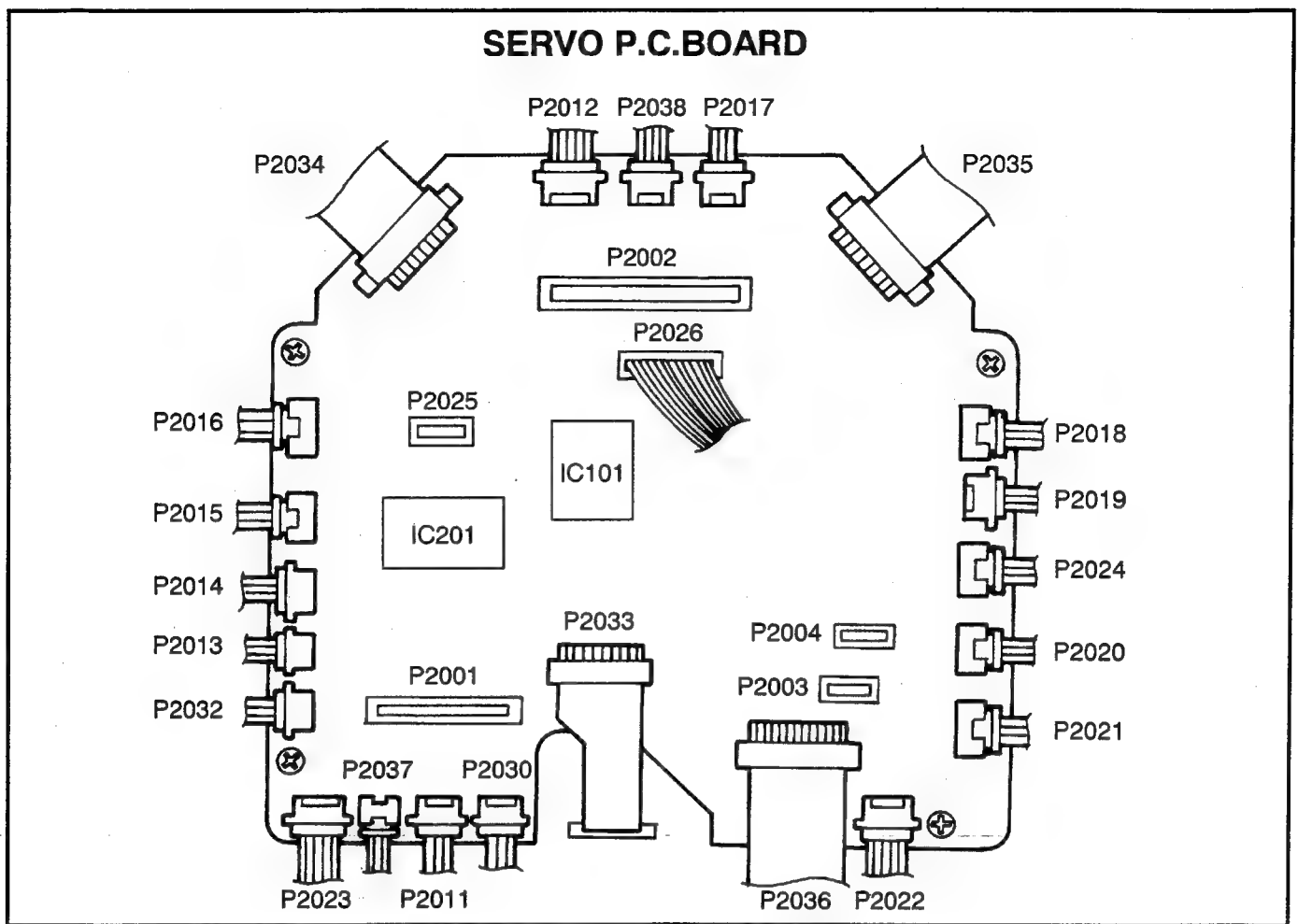
SERVO P.C.BOARD

Fig. 6-3-1   Connection of Servo P.C.Board
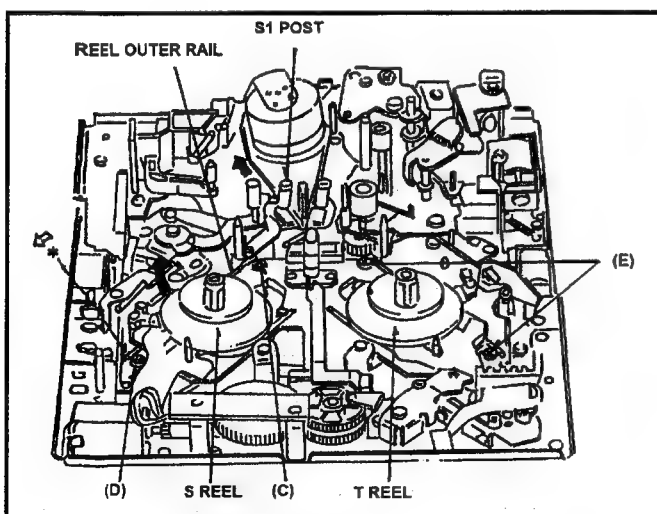
Fig. 6-3-2   Removal of S & T Reel Rotor Unit
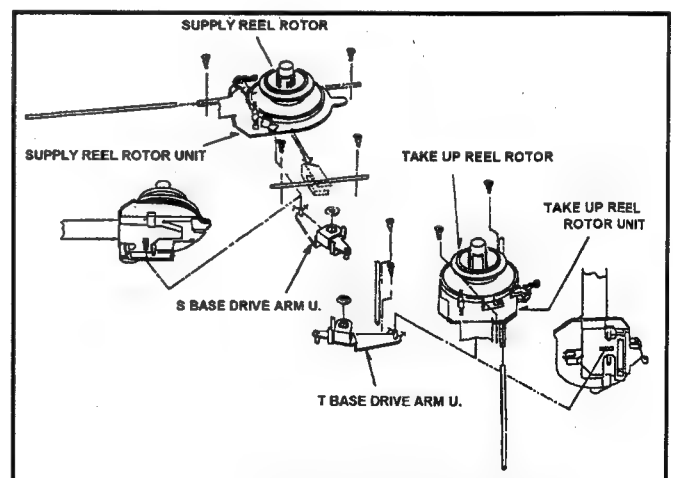
Fig. 6-3-3   Install of S & T Reel Rotor Unit

6-4. Loading Motor Unit Replacement

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit.
4. Disconnect the connector P2021 on Servo P.C.Board as shown in Figure 6-3-1.
5. Remove the Pinch Solenoid Unit (Refer to item 6-9).
6. Remove the Pinch Solenoid Lever. (Refer to item 6-5).
7. Unscrew the screw (B), and remove the Emergency Shaft as shown in Figure 6-4-1.
8. Unscrew the 2 screws (C) and remove the Loading Motor Neutral Unit as shown in Figure 6-4-1.
9. Unscrew the 2 screws (D) and remove the Loading Motor Unit as shown in Figure 6-4-1.
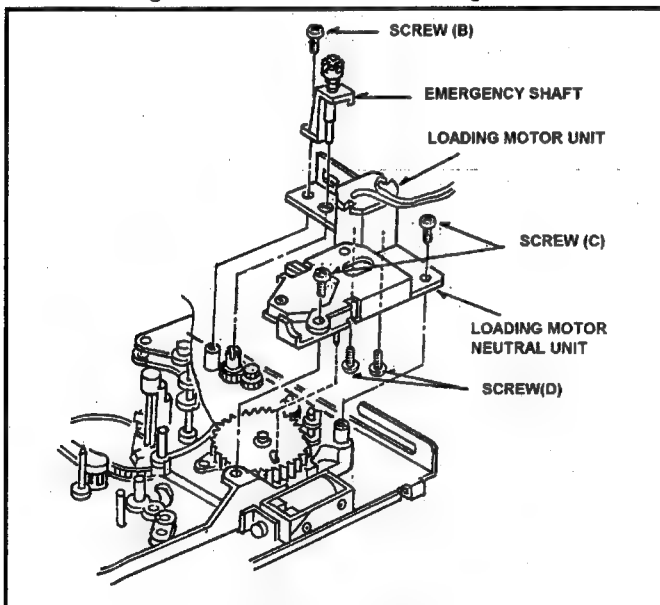
Fig. 6-4-1   Removal o Loading Motor Unit

(Installation)
1. Install the new Loading Motor Unit to Loading Motor Neutral Unit by tightening 2 screws (D).
2. Install the Loading Motor Neutral Unit by tightening the 2 screws (C), then be careful that the pin of Mode SW Unit should be matched to groove position of main Cam Gear.
3. Install the Emergency Shaft by tightening the screw (B).
4. Install the Pinch Solenoid Unit and after installation it, Pinch Solenoid Position adjustment is required. (Refer to item 5-3).

6-5. Pinch Arm Unit Replacement

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit.
4. Disconnect the connector P2020 on the Servo P.C.Board as shown in Figure 6-3-1.
5. Remove the Pinch Solenoid Unit (Refer to item 6-9, then hang off the Pinch Solenoid Lever as shown in Figure 6-5-1.
6. Remove the cut washer (A) and remove the Pinch Solenoid Lever as shown in Figure 6-5-1.
7. Remove the cut washer (B) and remove the Pinch Arm Unit as shown in Figure 6-5-1.

(Installation)
1. Install the new Pinch Arm Unit follow the removal steps in reverse order then Pinch Solenoid Position Adjustment is necessary (Refer to item 5-2).
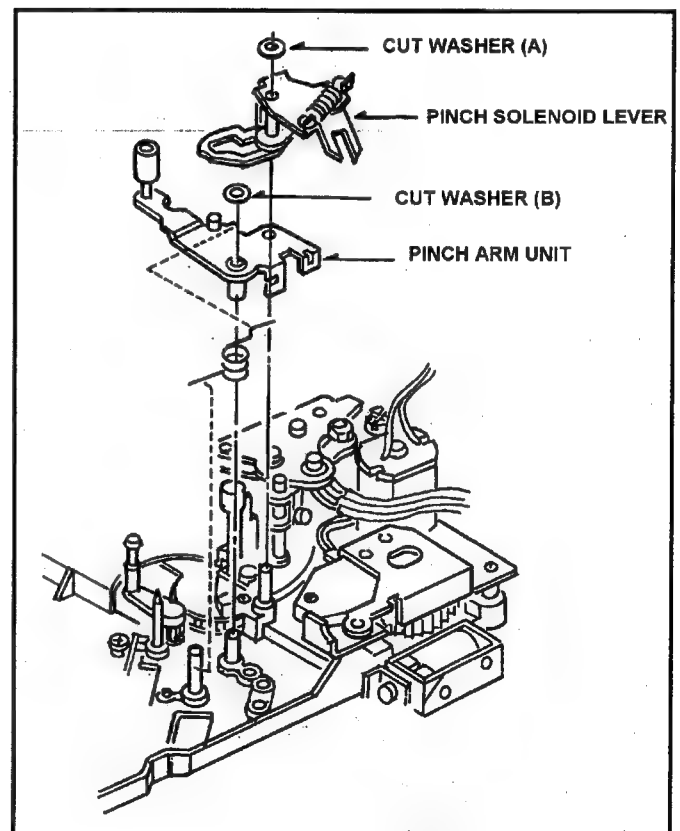
Fig. 6-5-1   Removal of Pinch Arm Unit

6-6. Supply and Take Up Brake Arm Unit Replacement

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Press the iron core of Brake Solenoid for release the Brake.
4. Remove the cut washers (A) and remove the supply and Take Up Brake Arm Unit as shown in Figure 6-6-1.

(Installation)
1. When install the new Brake Arm Unit first, hang on the Brake Arm Spring as shown in Figure 6-6-1.
2. Follow the previous steps in reverse order.
3. Main Brake Torque confirmation is required (Refer to item 5-3).
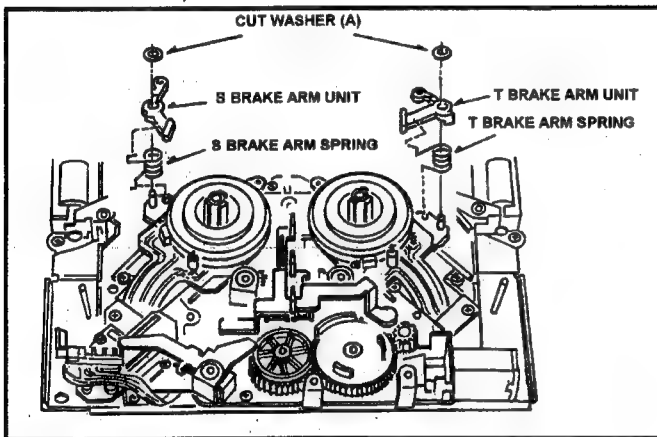
4. Confirm that the Tension value on the Playback mode (Refer to item 5-11).

Fig. 6-6-1   Removal of S & T Brake Arm Unit

6-7. Mode Select Switch Unit Replacement

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit..
4. Disconnect the connector P2022 on the Servo P.C.Board as shown as Figure 6-3-1.
5. Remove the Pinch Solenoid Unit and Loading Motor Neutral Unit (Refer to item 6-4).
6. Remove the screw (D) and remove the Mode Select Switch Unit from Loading Motor Neutral Unit as shown in Figure 6-7-1.

(Installation)
1. Install the New Mode Select Switch Unit follow the removal steps in reverse order (Please refer to item [6-4. Loading Motor Unit Replacement]).

Note: Be careful the pin of Mode Switch Unit should be matched to groove of Main Cam Gear.

2. After install the Pinch Solenoid Unit, Pinch Solenoid Position adjustment is required (Refer to item 5-2).
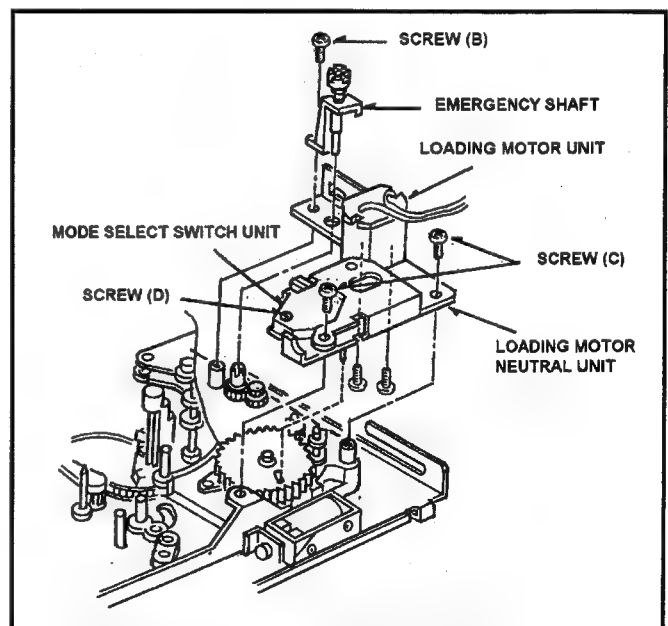
Fig. 6-7-1   Remove of Mode Select Switch Unit

6-8. Cleaning Arm Unit Replacement

(Removal)
1. Remove the Top Plate.
2. Unscrew the 2 screws (A) and remove the T1 Guide.
3. Hang off the tip portion (B) of cleaning Arm Unit and hang off the spring from Cleaner Arm Unit, then remove the Cleaning Arm Unit as shown in Figure 6-8-1.

(Installation)
1. Install the Cleaning Arm Unit, then hang on the spring to Cleaning Arm Unit.
2. Install the T1 Guide by tightening 2 screws (A).
3. Press the iron core of the Cleaner Solenoid and confirm that the Cleaner Roller is rotated, when the cylinder is rotated by hand.
4. T1 Guide position adjustment should be performed as follows.
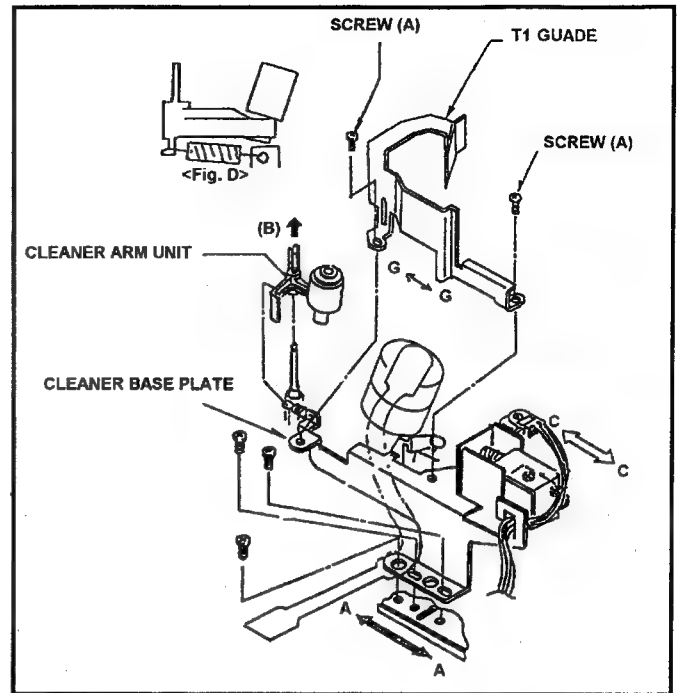
6-8-1. T1 Guide Position Adjustment

Place the Loading completed position.

< How to making the Loading Condition >
● Open the "Servo Adjust" menu in the "Service Menu".
● Select the item "T TORQUE" and press the BIGIN button for making the loading condition and turn power to off.

1. Observe the clearance (B) between T1 Guide and T1 post as shown in Figure 6-8-2. And make sure that it is within 0.2 to 0.5mm.
2. If not, loosen the 2 screws (A) and adjust the position of T1 Guide by moving arrow direction (G ⇔ G) so that the clearance (B) is within specification. And tighten the 2 screws (A).

Fig. 6-8-1   Removal of Cleaner Roller Unit
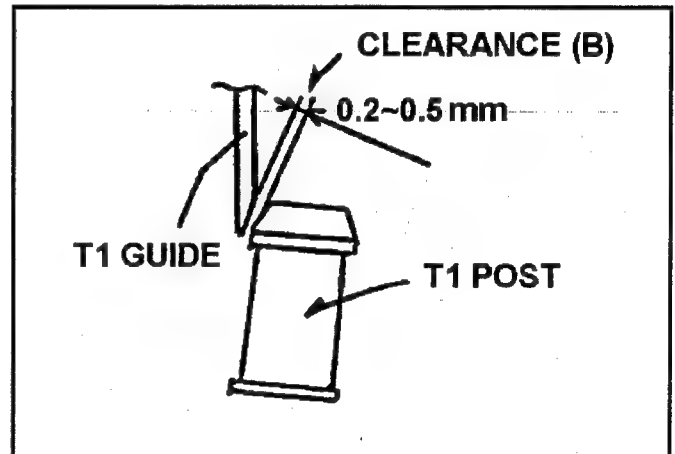
Fig. 6-8-2   Adjust of T1 Guide

6-9. Pinch Solenoid Replacement

(Removal)

1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit.
4. Disconnect the connector P2020 on the Servo P.C.Board as shown in Figure 6-3-1.
5. Unscrew the 2 screws (A) and remove the Pinch Solenoid Unit as shown in Figure 6-9-1.
6. Unscrew the 2 screws (B) and remove the Pinch Solenoid Angle as shown in Figure 6-9-1.
7. Unscrew the 2 screws (C) and remove the Pinch Solenoid from the Pinch Solenoid Base.

(Installation)

1. Install the new Pinch Solenoid follow the removal steps in reverse order.
2. After installation, Pinch Solenoid Position Adjustment is required (Refer to item 5-2).
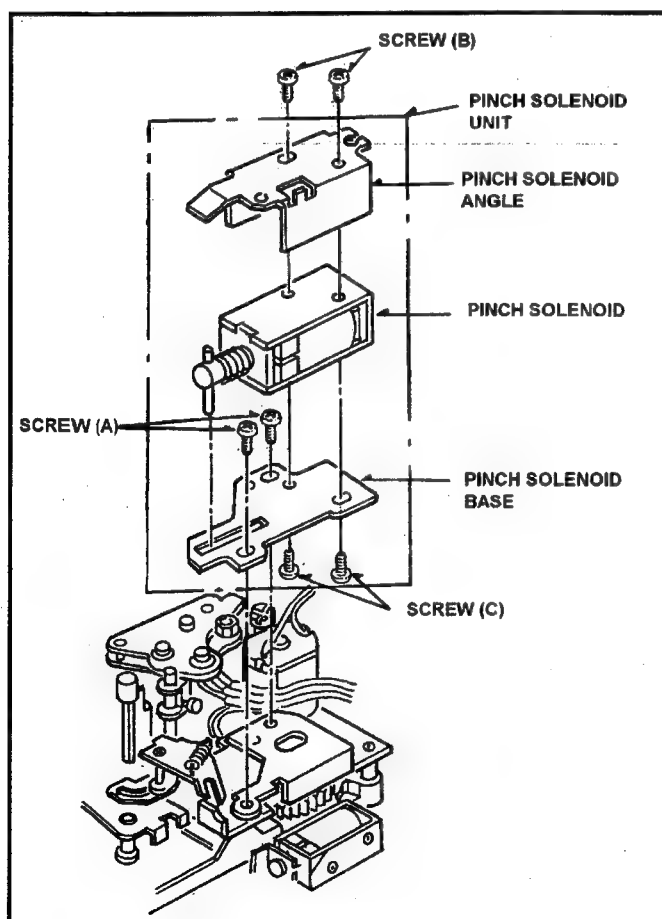
Fig. 6-9-1.   Removal of Pinch Solenoid

6-10. Supply Brake Solenoid Replacement and Adjustment

(Removal)

1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit.
4. Disconnect the connector P2015 on the Servo P.C.Board.
5. Unscrew the 2 screws (A) and remove the Supply Brake Solenoid Base Unit as shown in Figure 6-10-1.
6. Unscrew the 2 screws (B) and remove the supply Brake Solenoid from Supply Brake Solenoid Base Unit as shown in Figure 6-10-1.
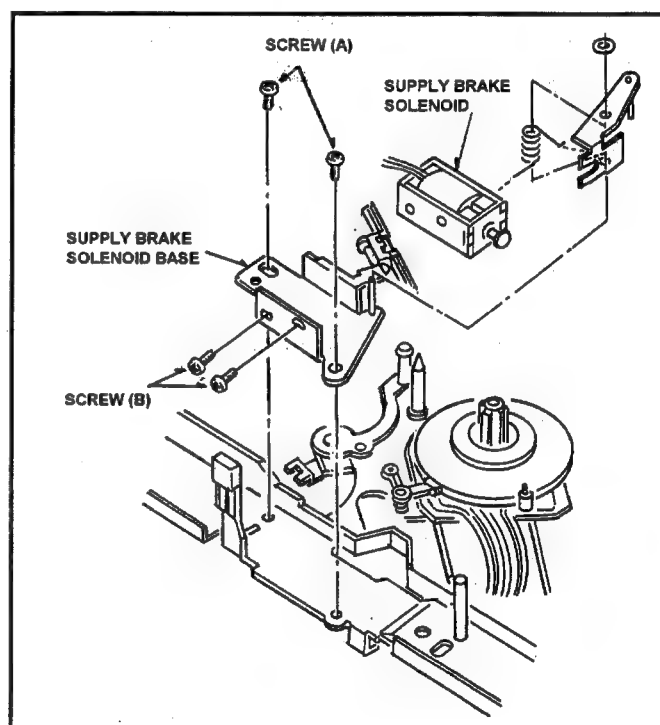
Fig. 6-10-1   Removal of Supply Brake Solenoid

(Installation)

1. Install the new supply Brake Solenoid follow the removal steps in reverse order.

(Adjustment)

1. Place the reels in the M cassette size position.
2. Observe the clearance (A) between Brake pad and it's turntable as shown in Figure 6-10-2. And make sure that it is within 0.2 to 0.5mm.
3. If not, loosen the 2 screws (A), which fixed supply and Take Up Brake Solenoid Unit. And adjust the position of Brake Solenoid Unit by moving arrow direction so that the clearance (A) is within specification. And tighten the 2 screws (A).
4. After adjustment, change the reel position to S and L cassette size, and confirm that the clearance (A) is within specification.
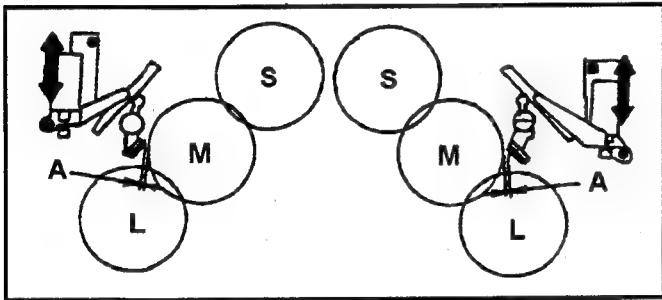
Fig. 6-10-2   Brake Solenoid Adjustment

6-11.   Take Up Brake Solenoid Replacement and Adjustment

(Removal)

1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit.
4. Disconnect the connector P2018 on the Servo P.C.Board.
5. Unscrew the 2 screws (A) and remove the Take Up Brake Solenoid Base Unit as shown in Figure 6-11-1.
6. Unscrew the 2 screws (B) and remove the Take Up Brake Solenoid from Take Up Brake Solenoid Base Unit as shown in Figure 6-11-1.
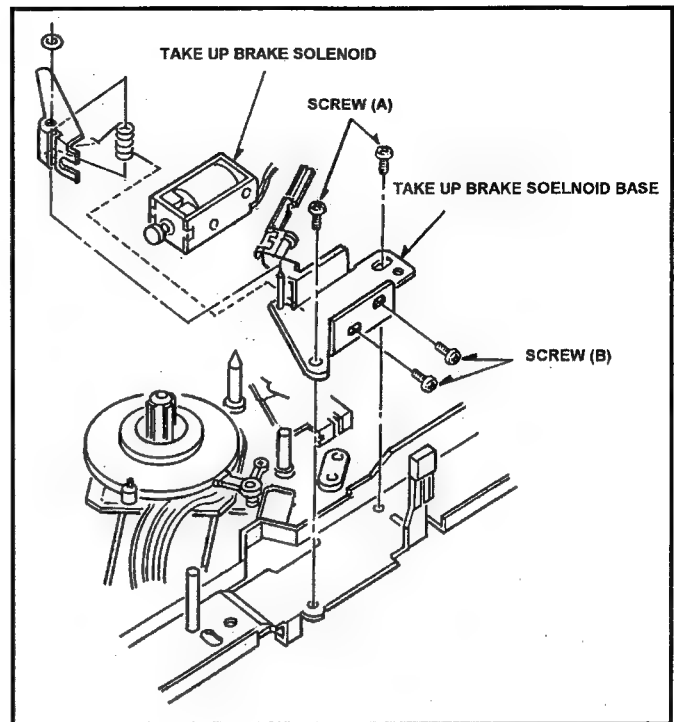
Fig. 6-11-1   Removal of Take Up Brake Solenoid

(Installation)

1. Install the new Take up Brake Solenoid follow the removal steps in reverse order.

Note: Hang on the Take up Brake Spring as shown in Figure 6-11-1.

2. After installation, position adjustment should be performed as follows.

(Adjustment)

1. Please adjust the position of Take up Brake Solenoid Unit follow the adjustment procedure, which is described item 6-10.

6-12. Distinction SW Unit Replacement

(Removal)

1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit.
4. Disconnect the connector P2017 on Servo P.C.Board.
5. Remove the MIC Drive Rev Spring at Distinction Switch Unit side as shown in Figure 6-12-1.
6. Unscrew the 3 screws (A) and remove the MIC Rail Unit as shown in Figure 6-12-1.

(Installation)

1. Install the new Distinction Switch Unit follow the removal steps in reverse order.
2. Confirm that the M and L cassettes touch to Distinction Switch Unit correctly.
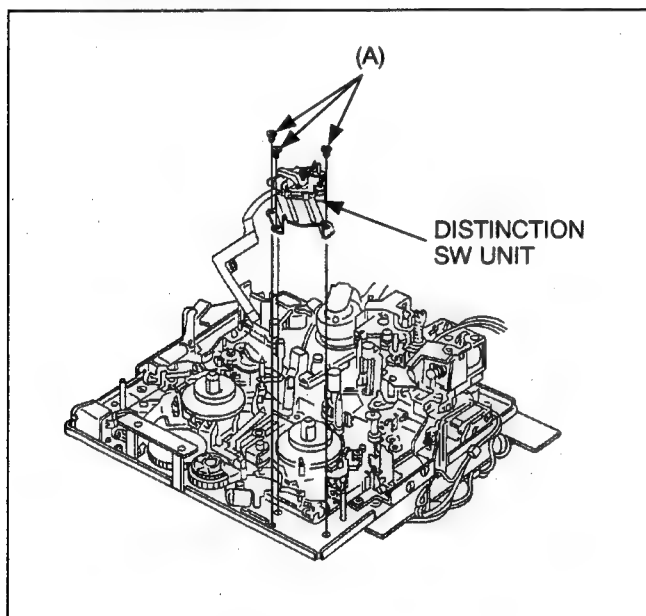
Fig. 6-12-1   Removal of Distinction Switch Unit

6-13. S1 Post Loading Arm Unit Replacement and Adjustment

(Removal)

1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the S5 Post Base Unit (Refer to item 6-17).
4. Remove the Tension Arm Unit(Refer to item 6-18).
5. Unscrew the screw (A) and remove the S1 Post from Loading Rail as shown in Figure 6-13-1.
6. Remove the Cut Washer (B) and remove the S1 Loading Arm Unit as shown in Figure 6-13-1.

(Installation)

1. Install the new S1 Loading Arm Unit follow the removal steps in reverse order, then S1 Post Loading Arm Unit Phase Adjustment should be performed as follows.
2. After installation, confirm that the S1 Post moving smoothly on the Loading Rail.
3. Tension Arm (Refer to item 5-5) and Linearity Adjustment. (Refer to item 5-13) should be performed.
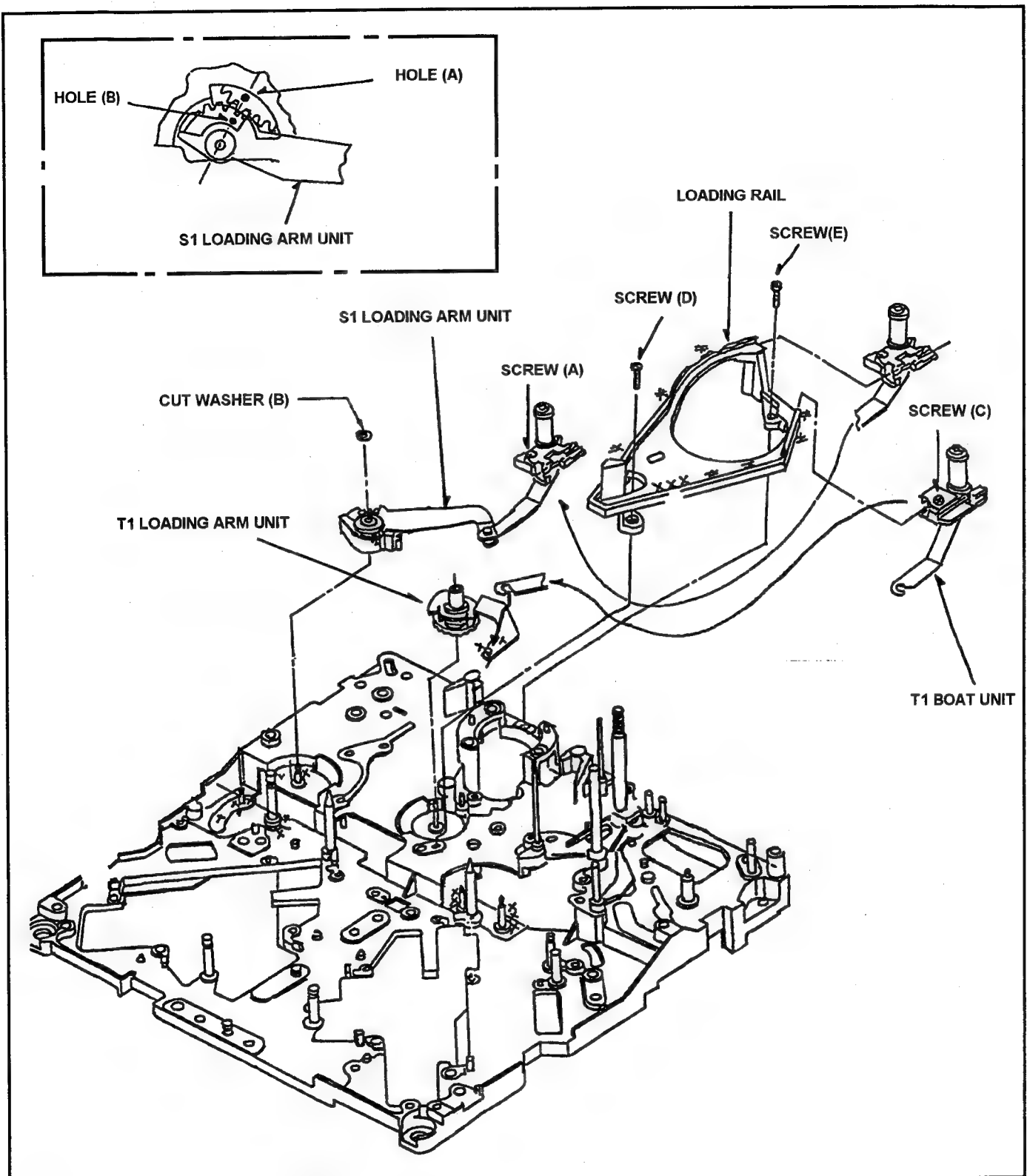
Fig. 6-13-1 Removal of S1 Post Loading Arm Unit

(Adjustment)

1. When install the S1 Post Loading Arm Unit, then
   the hole (A) should be matched hole (B) as shown
   in Figure 6-13-1.

6-14. T1 Boat Unit Replacement

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Unscrew the screw (C) and remove the T1 Post from Loading Rail as shown in Figure 6-13-1.
4. Hang off the T1 Boat Unit from T1 Loading Arm Unit as shown in Figure 6-13-1.

(Installation)
1. Install the new T1 Boat Unit follow the removal steps in reverse order.
2. After installation confirm that the T1 Post moving smoothly on the Loading Rail.
3. Linearity adjustment (Refer to item 5-13) should be performed.

6-14-1. T1 Loading Arm Unit Replacement and Adjustment

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the cylinder Unit (Refer to item 6-1).
4. Move the T1 Post to loading direction by manual ejecting method until the screw (D) can be removal position as shown in Figure 6-13-1.
5. Unscrew the 2 screws (A) and (C), then remove the S1 and T1 Post from Loading Rail as shown in Figure 6-13-1.
6. Unscrew the 2 screws (D) and (E), then remove the Loading Rail as shown in Figure 6-13-1.
7. Remove the T1 Loading Arm Unit as shown in Figure 6-13-1.

(Installation)
1. Install the T1 Loading Arm Unit follow the removal steps in reverse order, then Phase Adjustment should be performed as follows.

Note: This replacement should be performed simultaneously, replacement of Cylinder Unit. It is convenience for Replacement of T1 Loading Arm Unit.

(Adjustment)
1. When install the T1 Loading Arm Unit, then the hole (A) should be matched hole (B) as shown in Figure 6-14-1.
2. After installation confirm that the S1 and T1 Post moving smoothly on the Loading Rail.
3. Post Height Pre-adjustment (Refer to item 5-4) and Linearity adjustment (Refer to item 5-13 [Tape Pass Adjustment Procedure]) should be performed.

HOLE (B)   HOLE (A)
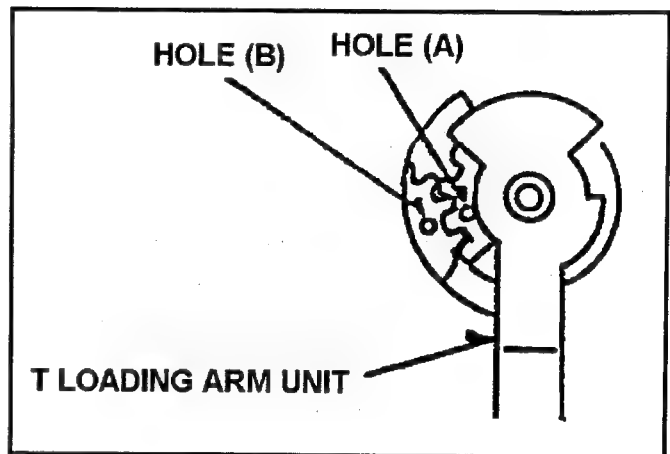
T LOADING ARM UNIT

Fig. 6-14-1 Phase Adjustment of T1 Loading Arm Unit

6-15. Cleaner Solenoid Replacement and Adjustment

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit.
4. Disconnect the connector P2037 on the Servo P.C.Board.
5. Unscrew the 2 screws (A) and remove the Cleaner Solenoid Unit as shown in Figure 6-15-1.
6. Unscrew the 2 screws (B) and remove the Cleaner Solenoid as shown in Figure 6-15-1.

(Installation)
1. Install the new Cleaner Solenoid follow the removal steps in reverse order.
2. After installation, Cleaner Solenoid Position adjustment should be performed as follows.
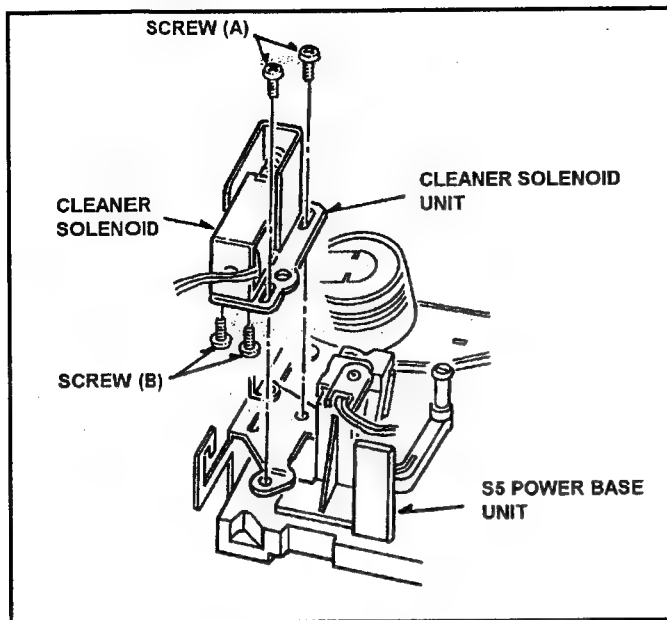
Fig. 6-15-1   Removal of Cleaner Solenoid

6-15-1. Cleaner Solenoid Position Adjustment

※ Tools Required   :   Eccentric Driver (VFK0357)

1. Press the iron core of Cleaner Solenoid.
2. Observe the clearance (D) between Cleaning Arm Unit and Cleaner Base Plate as shown in Figure 6-15-2. And make sure that it is within 0.5 to 0.7mm.
3. If not, loosen the 2 screws (A) and adjust the position of Cleaner Solenoid Unit by moving arrow direction (C⇔C) using the Eccentric drive so that the clearance (D) is within specification. And tighten the 2 screws.
4. After adjustment, confirm that as follow.
5. Press the iron core of Cleaner Solenoid and released it, then the Cleaning Roller is return to original position.
6. Press the iron core of the Cleaner Solenoid and confirm that the Cleaner Roller is rotated, when the Cylinder is rotated by hand.

Fig. 6-15-4   Cleaner Solenoid Position Adjustment
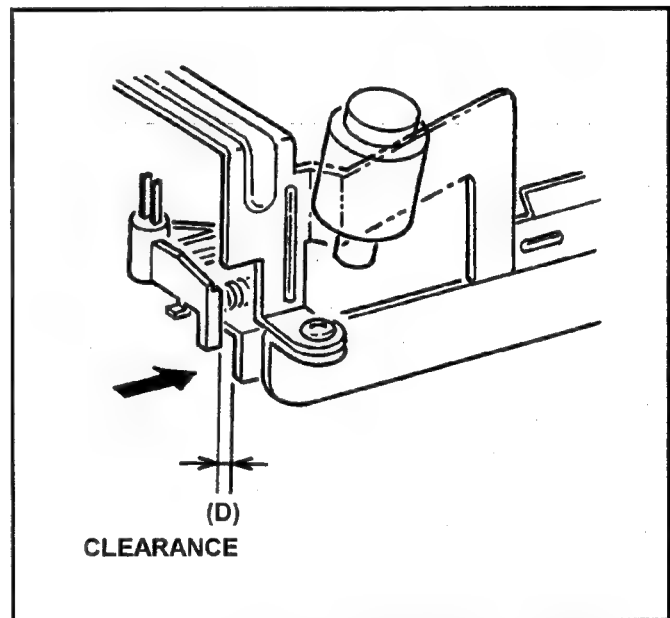
Fig. 6-15-2   Cleaner Solenoid Position Adjustment

Note: If remove the cleaner Base Plate, Cleaner roller Position adjustment should be performed.

6-15-2. Cleaner Roller Position Adjustment

※ Tools Required : Eccentric Driver (VFK0357)

1. Observe the clearance (A) between Cleaner Roller and cylinder Unit as shown in Figure 6-15-3. And make sure that it is within 1.0 to 1.2mm.
2. If not, loosen the 2 screws (B) and adjust the position of Cleaner Base Plate by moving arrow direction (A ⇔ A) using the Eccentric driver so that the clearance (A) is within specification. And tighten the 2 screws (B).
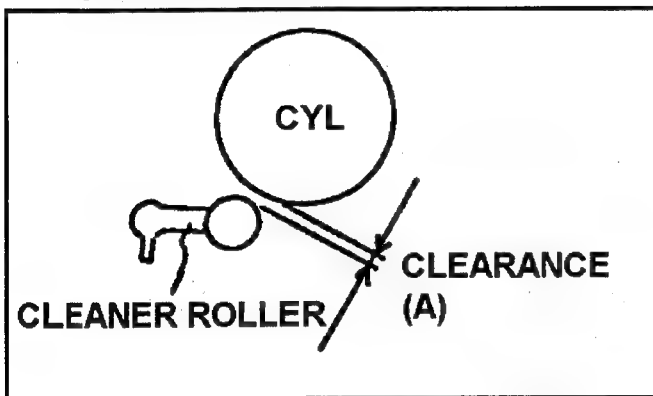
Fig. 6-15-3   Cleaner Roller Position Adjustment

6-16.   Reel Drive Motor Unit Replacement

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit.
4. Disconnect the connector P2016 on the Servo P.C.Board.
5. Unscrew the 2 screws (A) and remove the Reel Drive Sensor P.C.Board as shown in Figure 6-16-1.
6. Unscrew the 2 screws (B) and remove the Reel Drive Motor Unit as shown in Figure 6-16-1.

(Installation)
1. Install the new Reel Drive Motor Unit follow the removal step in reverse order.
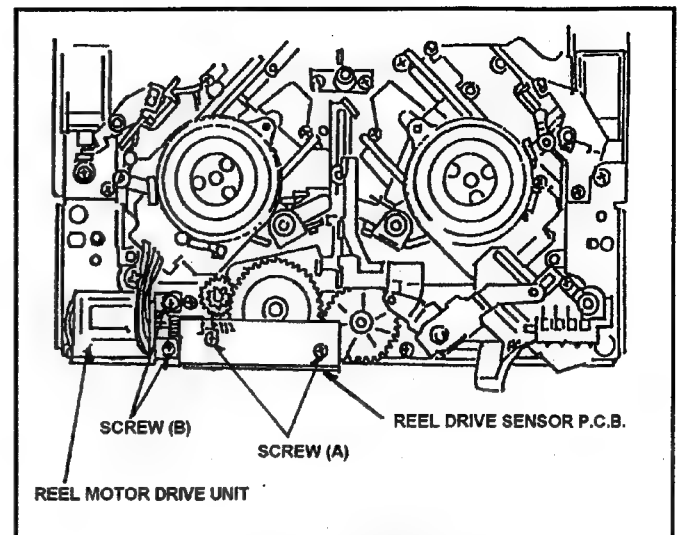
Fig. 6-16-1   Removal of Reel Drive Motor Unit

6-17.   S5 Post Base Unit Replacement

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Unscrew the screw (A) and remove the S5 Post Base Unit as shown in Figure 6-17-1.

(Installation)
1. Install the S5 post Base Unit follow the removal steps in reverse order, then be careful the S5 Post Base Unit is install to mech chassis as shown in Figure 6-17-1.
2. After installation, Post Height pre-adjustment (Refer to item 5-4) and Linearity adjustment (Refer to item 5-12 [Tape Pass Adjustment Procedure]) should be performed.
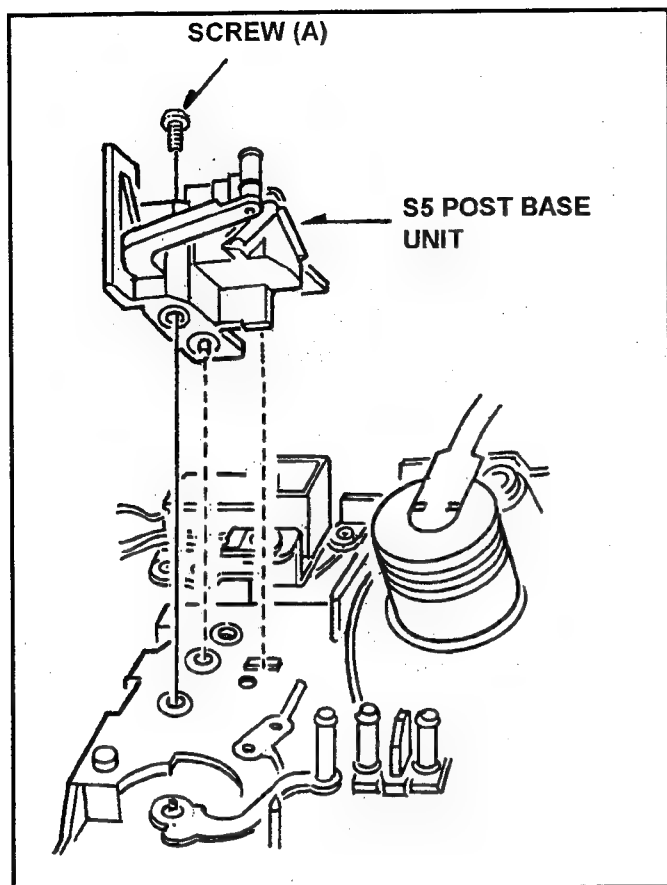
Fig. 6-17-1   Removal of S5 Post Base Unit

Fig. 6-18-1   Removal of Tension Arm Unit

6-18. Tension Arm Unit Replacement

(Removal)

1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Cut Washer (A) and hang off the Tension Regi Spring, then remove the Tension Arm Unit as shown in Figure 6-18-1.

(Installation)

1. Install the new Tension Arm Unit follow the removal steps in reveres order.
2. After installation, Tension Arm Adjustment should be performed the following steps.

Tension Arm Adjustment Flowchart

```
                 START
                   |
        5-6. TENSION OFFSET ADJUSTMENT
                   |
        5-7. NEUTRAL POSITION ADJUSTMENT
                   |
        5-8. PLAYBACK VOLTAGE ADJUSTMENT
                   |
        5-8. REV VOLTAGE CONFIRMATION  —— NG
                   |
        5-9. TENSION REGULATOR SPRING
             ADJUSTMENT
                   |
        5-10. REV TENSION CONFIRMATION  —— NG
                   |
                  END
```
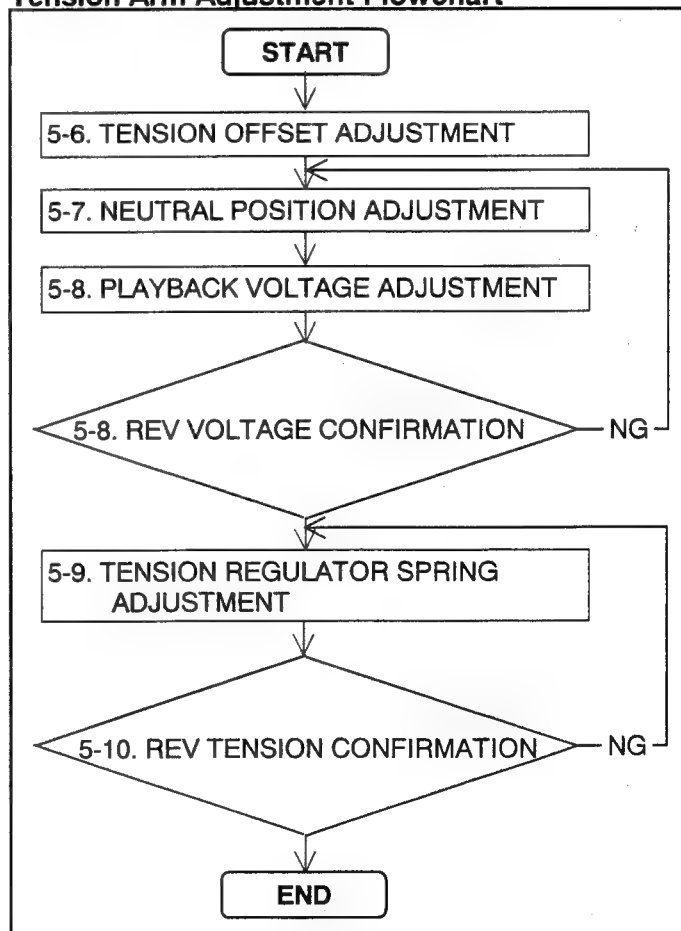
6-19. Main Cam Gear Replacement

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Pinch Solenoid Unit (Refer to item 6-5) and Loading Motor Neutral Unit (Refer to item 6-4).
4. Remove the Main Cam Gear as shown in Figure 6-19-1.

(Installation)
1. Install the Main Cam Gear, then the pin of Main Cam Arm Unit (※) should be matched with the groove position of Main Cam Gear as shown in Figure 6-19-1.
2. Follow the removal steps in reverse order.
3. After installation, Pinch Solenoid Position Adjustment is required (Refer to item 5-2).

MAIN CAM GEAR

CAM GROOVE

✳

MAIN CAM ARM UNIT
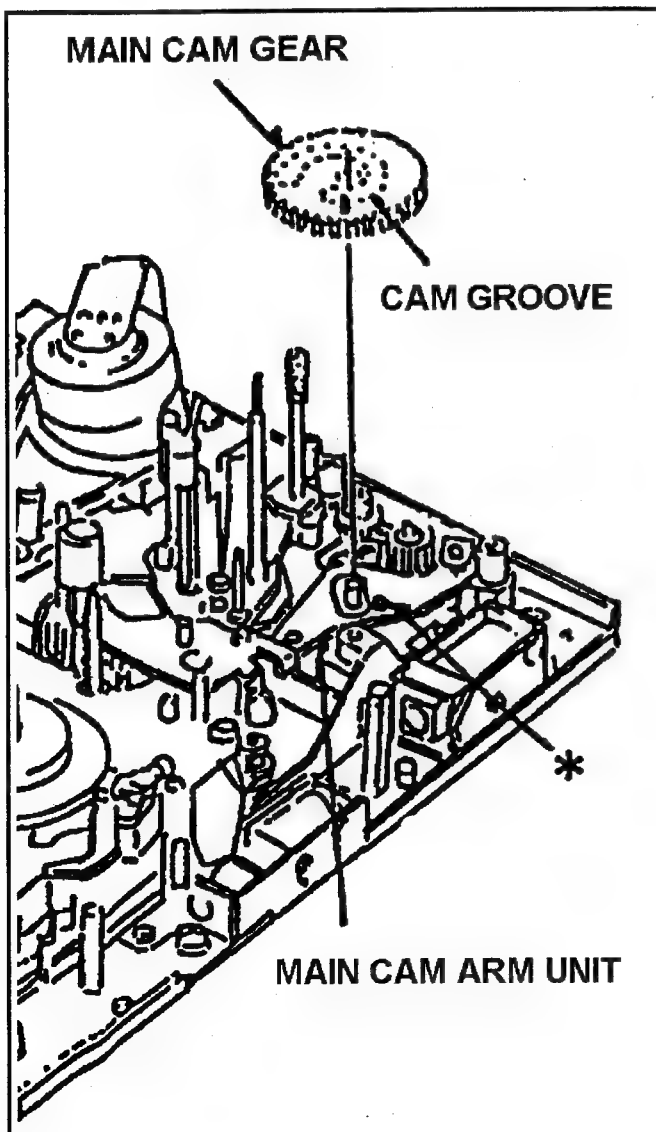
Fig. 6-19-1   Removal of Main Cam Gear

6-20. M-Stopper Solenoid Replacement And Adjustment

(Removal)
1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Remove the Bottom Plate Unit.
4. Remove the connector P2024 on the Servo P.C.Board.
5. Unscrew the 4 screws (A) and (B) and remove the M-Stopper Solenoid as shown in Figure 6-20-1.

(Installation)
1. Install the new M-Stopper Solenoid follow the removal steps in reverse order.
2. After installation, position adjustment should be performed as follows.

(A)

M STOPPER SOLENOID

(B)
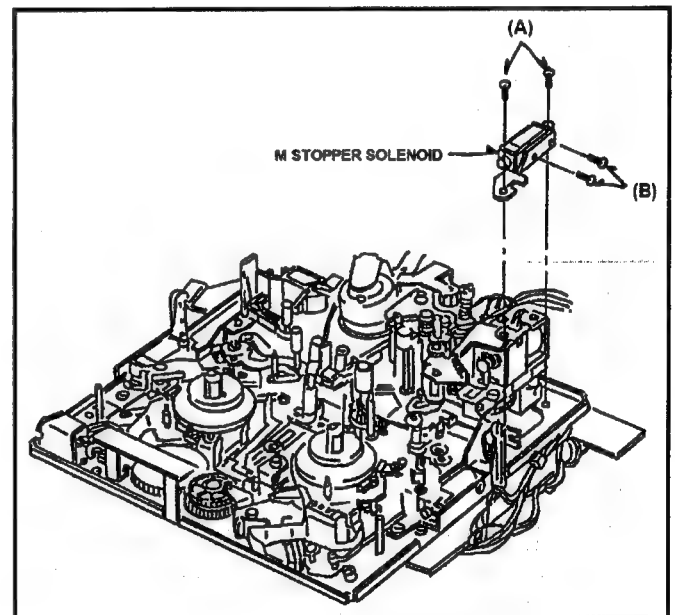
Fig. 6-20-1   Removal of M-Stopper Solenoid

(Adjustment)
1. Place the reels in the L size position.
2. Push the iron core of M-Stopper Solenoid by hand.
3. Observe the clearance (A) between Mech Chassis and M-Stopper as shown in Figure 6-20-2. And make sure that it is within 1.1 to 1.3mm.
4. If not, loosen the 2 screws (A), which fixed M-Stopper Solenoid. And adjust the position of M-Stopper Solenoid so that the clearance (A) is within specification. And tighten the 2 screws (A).
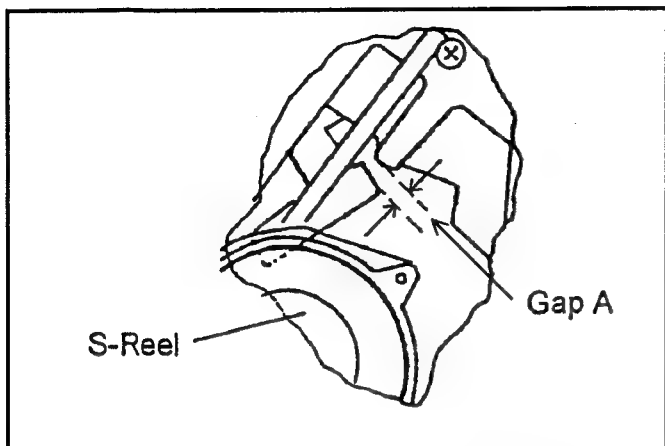
Fig. 6-20-2   M-Stopper Solenoid Adjustment

6-21. L-M Release Angle Unit Replacement

(Removal)

1. Remove the Top Plate.
2. Remove the Front Loading Unit.
3. Unscrew the 2 screws (A) and remove the L-M Release Angle Unit as shown in Figure 6-21-1.

(Installation)

1. Install the new L-M Release Angle Unit follow the removal steps reverse order.
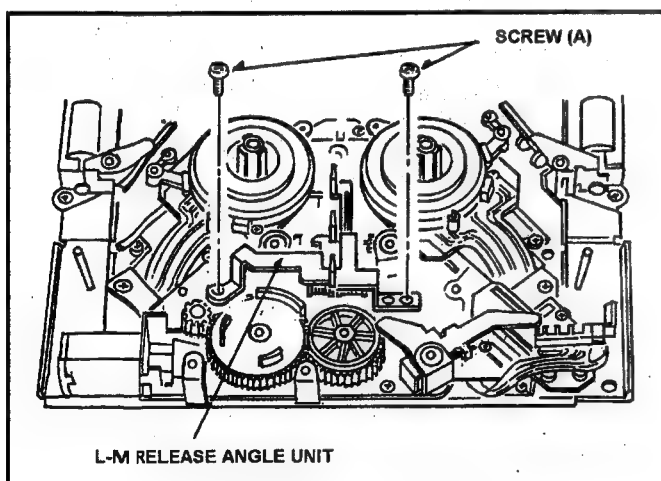
Fig. 6-21-1   Removal of L-M Release Angle Unit

6-22. Slide Rod Unit Replacement and Adjustment

(Removal)

1. Remove the Top Plate Unit.
2. Remove the Front Loading Unit.
3. Remove the L-M Release Angle Unit. (Refer to item 6-21).
4. Remove the Reel Drive Sensor P.C.Board (Refer to item 6-16).
5. Remove the Cut Washer (A) and remove the Reel Drive Cam Gear.
6. Remove the Cut Washer (B) and remove the MIC Drive Arm Unit.
7. Remove the Cut Washer (C) and remove the MIC Geneva Gear.
8. Remove the Cut Washer (D) and remove the Reel Drive Arm Unit as shown in Figure 6-22-3.
9. Remove the Supply and Take Up Reel Rotor Unit (Refer to item 6-3-1).
10. Remove the 2 Cut Washers (E) and remove the Supply and Take Up Base Drive Arm Unit.
11. Remove the 2 Cut Washers (F) and remove the Slide Rod Unit.

(Installation)

1. Install the new Slide Rod Unit follow the removal steps in reverse order.
2. When install the Reel Drive Cam Gear and MIC Geneva Gear, then phase adjustment should be performed as follows.

(Adjustment)

1. Install the MIC Geneva Gear to the Chassis.
2. Place the Reels in the M-Size position by hand.
3. Install the MIC Drive Arm Unit.
4. Place the REC Inhibit SW in front position on Distinction SW Unit by rotation of MIC Geneva Gear, and then MIC Geneva Gear should be positioned as shown in Figure 6-22-2.

Note: Protrusion of MIC DRIVE Arm Unit is positioned as shown in Figure 6-22-2.

5. Install the Reel Drive Cam Gear and hole of Reel Drive Cam Gear should be matched with the hole of MIC Geneva Gear as shown in Figure 6-22-2.
6. Install the Cut Washer (A), (B) and (C) as shown in Figure 6-22-2.

※Point of Adjustment
1) Reel in M-Seze position.
2) Set the REC Inhibit SW in front position of Distinction SW Unit.
3) Portrusion of MIC Drive Arm Unit is positioned as shown in Figure 6-22-2.
4) Holes between Reel Drive Cam Gear and MIC Geneva Gear are matched.
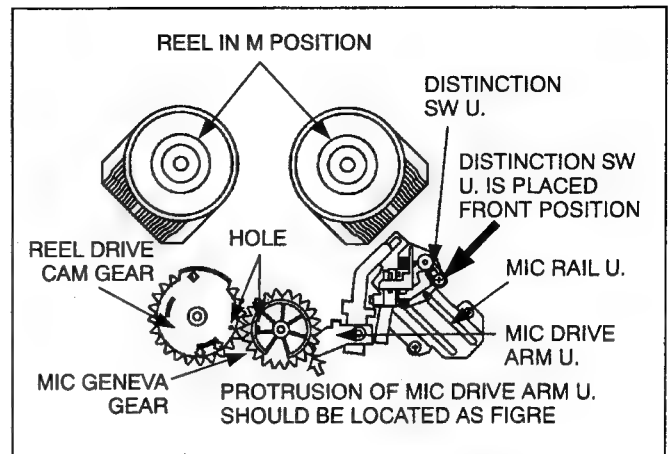
Fig. 6-22-2   Gear Phase Adjustment
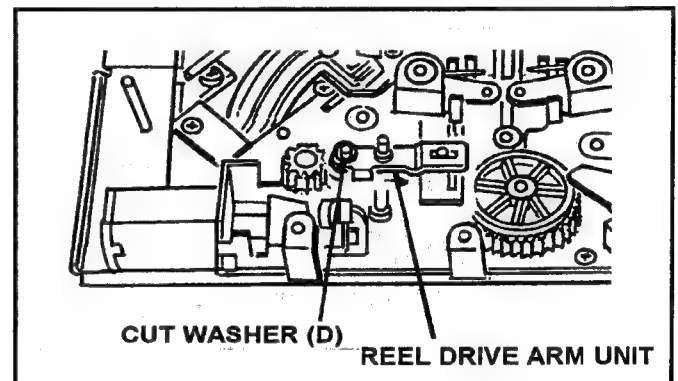
Fig. 6-22-3   Removal of Reel Drive Arm Unit
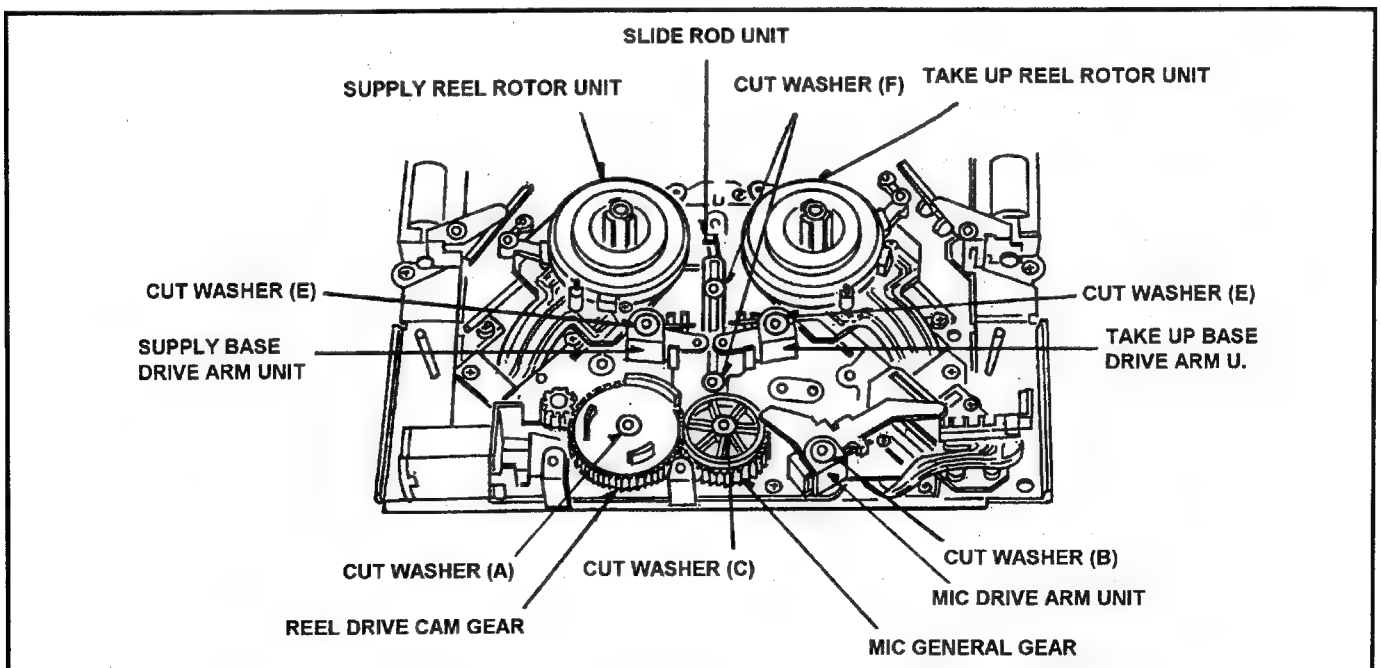
Fig. 6-22-1   Removal of Slide Red Unit

6-23. T4 Post Phase Adjustment

1. Confirm that the hole (B) of T4 connection Gear was matched to hole of T4 post as shown in figure 6-23-1.
2. Confirm that the portion (C) of T4 connection Gear and hole (A) , which are located as shown in figure 6-23-1.

Note: This confirmation should be performed on unloading condition.

3. If not, adjust the phase of T4 post follow the above procedure.
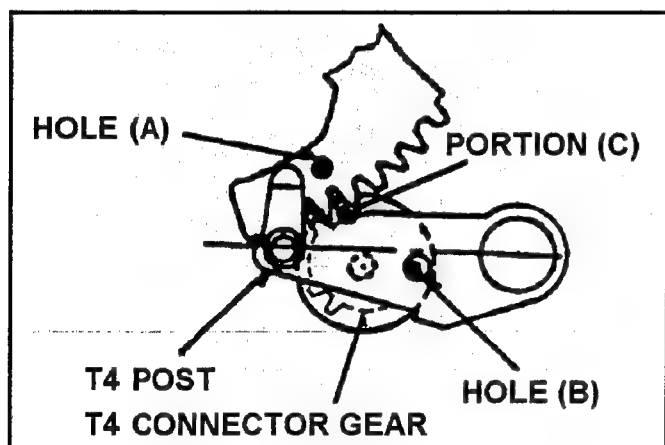
Fig. 6-23-1   Phase of T4 Post

6-24. Thrust Adjustment Screw Replacement and Adjustment

1. Remove the Thrust Adjustment Screw.
2. Enforce cleaning of point department of capstan shaft with an applicator.
3. Put the oil(VFK0906) on a new Thrust Adjustment Screw and install the upper end of the Capstan Housing.
4. Turn the Thrust Adjustment Screw slowly to counter-clockwise until the Capstan Rotor just starts turning (separate from the Capstan Rotor).
5. Turn the Trust Adjustment Screw an another angle of 270° from 180° (about 225°) clockwise as shown in Fig. 6-24-2.
6. Put the glue (Ex:: Three Bond 1401B) on the Thrust Adjust Screw.
7. Confirm whether the Oil Seal does not come in contact with the Capstan Housing.
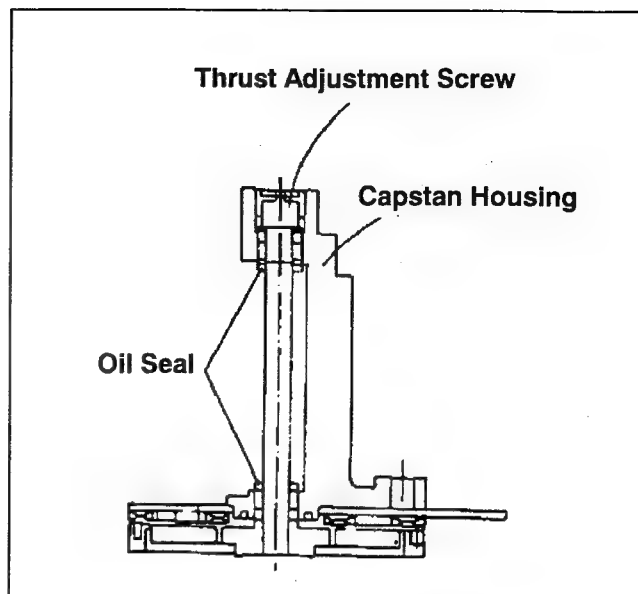
Fig.6-24-1 Removal of Trust Adjustment Screw
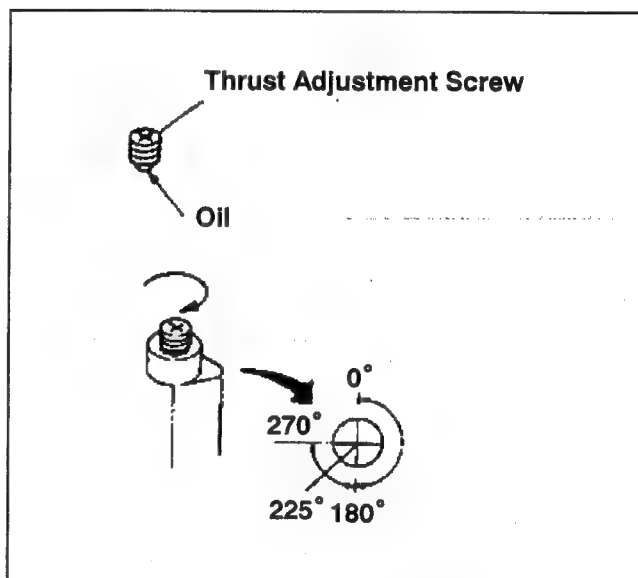
Fig.6-24-2 Adjustment of Thrust Adjustment Screw

SECTION 4

ELECTRICAL ADJUSTMENTS

CONTENTS

5. VIDEO I/O SECTION

7. AUDIO SECTION

1. POWER SECTION

1-1. DC Voltage Adjustment (DC5.6V)

Board	POWER 2
Spec.	5.75V ± 0.02V
Test	TP1001
Adjust	VR1001
Mode	------
M. Eq	Digital Volt Meter

1. Connect the digital voltmeter between the TP1001 and GND, and adjust the VR1001 so that the DV voltage is within the specification.

2. SERVO & AV SYSCON SECTION

2-1. Supply Reel Torque Offset Adjustment

Board	SERVO
Spec.	0 ± 5mV
Test	TP2403、TP2404 (GND)
Adjust	A02 : S OFFSET (SERVO ADJUST)
Input signal	------
Mode	EJECT
Tape	------
M. Eq	Digital Volt Meter.

1. Open the "A00: SERVO ADJUST" menu on Service menu and select the item "A02: S OFFSET".
2. Press the "DATA+" or "DATA-" button so that the DC voltage is within the specifification.

2-2. Take Up Reel Torque Offset Adjustment

Board	SERVO
Spec.	0 ± 5mV
Test	TP2453、TP2404 (GND)
Adjust	A01 : T OFFSET (SERVO ADJUST)
Input signal	------
Mode	EJECT
Tape	------
M. Eq	Digital Volt Meter

1. Open the "A00: SERVO ADJUST" menu on Service menu and select the item "A01: T OFFSET".
2. Press the "DATA+" or "DATA-" button so that the DC voltage is within the specifification.

2-3. Supply Reel Motor Torque Offset Adjustment

Board	SERVO
Spec.	15 ± 2g (five times on average)
Test	------
Adjust	A04 : S TORQUE (SERVO ADJUST)
Input signal	------
Mode	STOP
Tape	------
M. Eq	Dial Torque Gauge

1. Open the "A00: SERVO ADJUST" menu on Service menu and select the item "A04: S TORQUE".
2. Set the Dial Torque Gauge on the supply side reel table.
3. Push the "BEGIN" to enter the loading status.
4. Measure the torque five times, and find the average value.   Press the "DATA+" or "DATA-" in the status so that the torque is within the specification.

2-4. Take Up Reel Motor Torque Offset Adjustment

Board	SERVO
Spec.	15 ± 2g (five times on average)
Test	------
Adjust	A03 : T TORQUE
Input signal	------
Mode	STOP
Tape	------
M. Eq	Dial Torque Gauge

1. Open the "A00: SERVO ADJUST" menu on Service menu and select the item "A03: T TORQUE".
2. Set the Dial Torque Gauge on the Take up side reel table.
3. Press the "BEGIN" to enter the loading status.
4. Measure the torque five times, and find the average value.   Press the "DATA+" or "DATA-" in the status so that the torque is within the specification.

2-5. Photo Sensor Voltage Adjustment

Board	AV SYSCON
Spec.	A = 2.2 ± 0.6 VDC
Test	TP60002 (S PHOTO) TP60001 (T PHOTO)
Adjust	VR60002 (S-PHOTO) VR60001 (T-PHOTO)
Input signal	------
Mode	STOP
Tape	VFK1423(Tape Big./End Det.Casstte)
M. Eq	Oscilloscope

1. Insert the Alignment tape (VFK1423) and measure the voltage at Test Point.
2. Adjust VR60001 and VR60002 so that the A portion of DC voltage is within the specification.

Ignore like this voltage
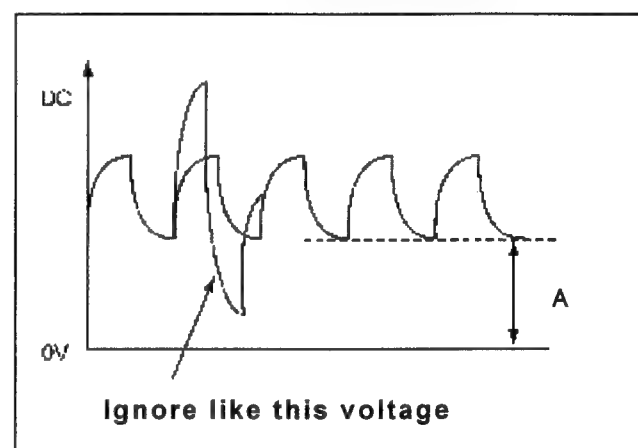
3. RF SECTION

3-1. Clock Refresh PLL Adjustment

Board	RF
Spec.	2100mV ± 50mV
Test	TP5402(E2) CH1, TP5757(A1) CH2
Adjust	VR5402(E2)
Input signal	------
Mode	PLAY
Tape	VFK3580KM (Color bar portion)
M. Eq	Oscilloscope

1. Connect the TP5402 to the CH1 and the TP5757 to the CH2 of the oscilloscope, respectively.

2. Adjust the VR5040 so that the value at TP5402 is within the specification.

TP5402

TP5757

Before adjustment

2100±50mV

GND

After adjustment
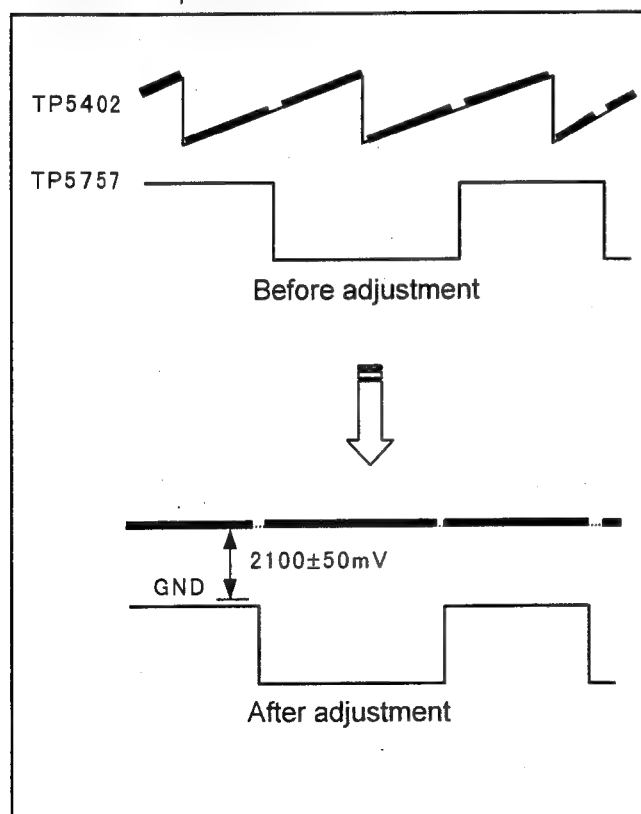
3-2. AUTO EQ Adjustment Procedures

< Preparation >

Test	RS232C Port
M. Eq	PC(w/o AD Board), RS232C cable (straight type) VFK1472A (RF Adj. Software)
Tape	VFM3583KM(Auto EQ Alignment Tape) VFM3010EDS(DV color bar Alignment tape)
Spec.	DVCPRO PB Head: under than –4.2 DVCPRO RP Head: under than –3.2 DV Playback : under than –3.0

1. Install RF Auto Adjustment Software (VFK1472A) to your PC/AT Compatible, MS-DOS later than 6.3 and Installed Windows3.1 or Windows95).
   * Make a new holder (example: c:md aeq) and copy all file from disk (VFK1472A).

2. Connect RS232C port of the VTR and Serial port of PC with 25pin - 9pin Straight Cable.

3. Confirm set-up menu setting as below. (default setting)
   - 104: TAPE IN MODE → STOP
   - 105: TAPE END MODE → STOP
   - 106: AUTO BACK → ON
   - 107: FORMAT SEL → DVCPRO
   - 108: REC INHIBIT → OFF
   - 200: BOUAD RATE → 9600
   - 201: DATA LENGTH → 8BIT
   - 202: STOP BIT → 1BIT
   - 203: PARITY → NONE
   - 204: ACK RETURN → ON
   - 111: MEMORY MODE → OFF

4. Set "Local/Menu/Remote" switch on the Front panel to "REMOTE" mode.

< Operation - How to use >
● Use Windows95

1. Select "Start" - "Program" - "MS-DOS Prompt" and open the DOS window.

2. Type "autoeq" on command line and press <Enter>.

3. PC displayed "Is serial No. xxxxxxx ok? ->" message, confirm serial number display is the same as VTR serial No.. If yes:press <Enter>, If no:type correct Serial No. and press <Enter>.

4. At next, PC displayed "Insert AUTO EQ Alignment Tape" message, insert VFM3583KM Alignment Tape into the VTR.

5. Then automatically start adjustment EQ adjustment and REC current adjustment. And wait until adjustment completed.

6. After finish DVCPRO EQ and REC adjustment, automatically dispalyed error rate for each Head. And please confirm error rate in the specification.

7. Repeat operation of item 2 and 3 as above.

8. At next, PC displayed "Insert AUTO EQ Alignment Tape" message, insert VFM3010EDS DV Alignment Tape into the VTR.

9. Then automatically start adjustment DV adjustment. And wait until adjustment completed.

10. After finish DV adjustment, automatically dispalyed error rate for each Head. And please confirm error rate in the specification.

Note: adjustment will take approx. 20min. (EQ Adj. → REC Adj. → DV Adj.)

● Use MS-DOS

1. Type "autoeq" on command line and press <Enter>.

2. After steps are the same as Windows95 mode.

< Error Rate Display >

When completed adjustment, automatically dis-played error rate for each Head as shown below.

***** *Example* *****
(For DVCPRO)

    DVCPRO PB-Head(master tape) → -5.0,-5.0,-5.0,-5.0
    DVCPRO RP-Head(master tape) → -5.0,-5.0,-5.0,-5.0
    DVCPRO PB-Head(normal tape) → -5.0,-5.0,-5.0,-5.0
    DVCPRO RP-Head(normal tape) → -5.0,-5.0,-5.0,-5.0

        Video L-ch error ─────────┘
        Video R-ch error ──────────┘
        Audio L-ch error ───────────┘
        Audio R-ch error ────────────┘

NOTE:

(master tape): alignment tape playback error rate

(normal tape): self-recording tape playback error rate

(For DV)

    DV(master tape)   → -5.0,-5.0,-5.0,-5.0

    Video L-ch error ─────────┘
    Video R-ch error ──────────┘
    Audio L-ch error ───────────┘
    Audio R-ch error ────────────┘
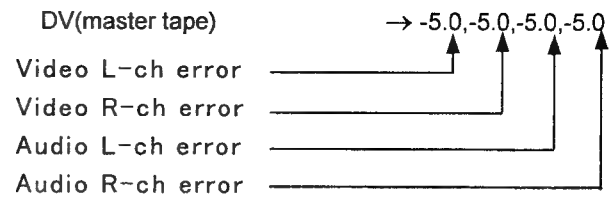
< Option Command >

The adjustment program can be changed as follows;
    autoeq - <option letter>
    (make space between "autoeq" and "-")
    ● example: Option list display → autoeq -h
        <Enter>

    p: Playback EQ adjustment only
    r: Recording adjustment only
    z: Recording & DV EQ adjustments
    d: No display for error rate and adjustment value during adjustment
    l: No output to log file for error rate and adjustment value during adjustment
    i: Adjustment start based on defalut value
    f: Perform recording frequency adjustment
    a: No execute DV interchange ability adjustment
    h: Option list & version display

< Create File >

During adjustment, the following files (text file) automatically create in directory

    autoeq.log: Error rate, adjustment value and adjustment item during adjustment
    rf_err.dat: Error rate measurement value after completed adjustment
    adj.dat: All RF adjustment value after completed adjustment

< Program Quit >

1-1. Emergency program quit

1) Press STOT button.
2) Press EJECT button.
2) Try press <Ctrl> and <C> key.
3) Turn off the VTR power and will be come "Time out" message on PC display.
4) For Windows95, reboot the PC by <Ctrl> + <Alt> + <Del>key.

4. DIGITAL CORE SECTION

4-1. Dip Switch Initial Setting

Set the dip switches by following the steps below.

1. Set the bit1 of DIP SW101 to ON and set the bit 2 to 4 of DIP SW101 to OFF position.
2. Set the bit 1 through 8 of DIP SW102 to ON position.

DIGITAL CORE BOARD

SW101

SW102
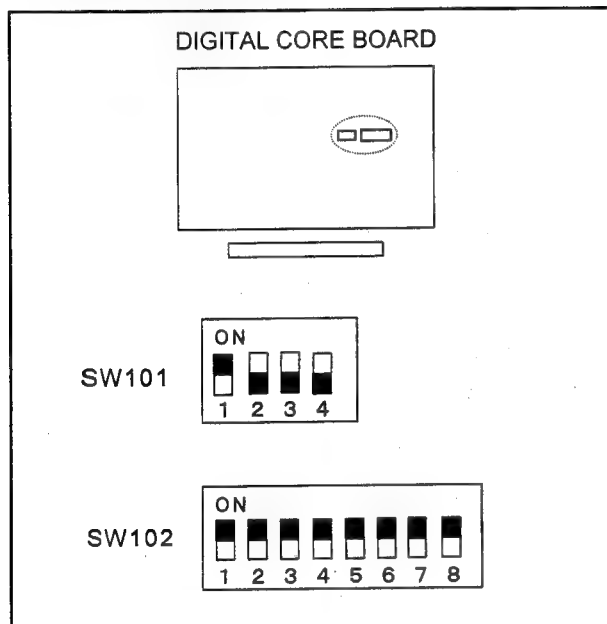
4-2. Audio VCO Center Frequency 48 KHz Adjustment

Board	DIGITAL CORE
Spec.	48.00 ± 0.01KHz
Test	TP3104(LRCLK)
Adjust	VR3101
Input signal	------
Mode	EJECT
M. Eq	Frequency Counter

1. Open the "B00: MODE SELECT" menu of Service menu and set the item "B09:AD VCO TEST" to "48/TST" MODE.
2. Adjust the VR3101 so that the frequency is within the specification.

4.3. Audio VCO Center Frequency 44.1 KHz Adjustment

Board	DIGITAL CORE
Spec.	44.1 ± 0.01KHz
Test	TP3104(LRCLK)
Adjust	VR3102
Input signal	------
Mode	EJECT
M. Eq	Frequency Counter

1. Open the "B00: MODE SELECT" menu of Service menu and set the item "B09:AD VCO TEST" to "44/TST" MODE.
2. Adjust the VR3102 so that the frequency is within the specification.

4.4. Audio VCO Center Frequency 32 KHz Adjustment

Board	DIGITAL CORE
Spec.	44.1 ± 0.01KHz
Test	TP104(LRCLK)
Adjust	VR3103
Input signal	------
Mode	EJECT
M. Eq	Frequency Counter

1. Open the "B00: MODE SELECT" menu of Service menu and set the item "B09:AD VCO TEST" to "32/TST" MODE.
2. Adjust the VR3103 so that the frequency is within the specification.

5. TBC SECTION

Note:

1. Warm up the VTR more than 10 minutes before start the adjustment.
2. REF INPUT signal sholud be synchronized VIDEO INPUT signal.

5-1. PLL Lock DC Adjustment

Board	TBC
Spec.	0± 0.1V
Test	TP3203
Adjust	VC3201
Input signal	VIDEO IN （75% Color Bar）
Mode	EE
M. Eq	Oscilloscope

1. Connect the TP3203 to the oscilloscope.
2. Adjust the VC3201 so that the DC voltage at TP3203 is within the specification.

5.2 SG S/H Adjustment

Board	TBC
Spec.	A = B± 10%
Test	TP3502 (RSC),TP3506 (SHP)
Adjust	VR3507(S/H PULSE)
Input signal	REF VIDEO IN (75% Color Bar)
Mode	EE
M. Eq	Oscilloscope

1. Connect the TP3502 to the CH1 and the TP3506 to the CH2 of the oscilloscope, respectively.
2. Adjust the VR3507 so that the A and B within the specification, when the centers of the TP3506 (S/H pulse signal) and TP3502 (burst signal) are syncronized as shown in below figure.

Note: The centers of the S/H pulse signal at TP3506 and TP3502 burst signal should be synchonized.
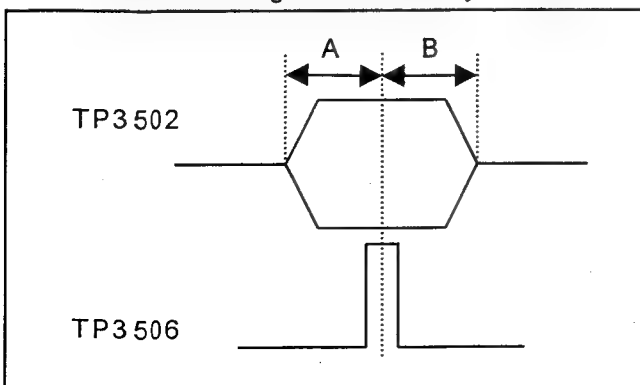
5-3. 14.3MHz VCO Adjustment

Board	TBC
Spec.	0± 100mV
Test	TP3507
Adjust	VC3501
Input signal	REF VIDEO IN （75% Color Bar）
Mode	EE
M. Eq	Oscilloscope

1. Connect the TP3507 to the oscilloscope.
2. Adjust the VC3501 so that the DC voltage at TP3507 is within the specification.

5-4. REF SCH Adjustment

Board	TBC
Spec.	A = B± 10%
Test	TP3503、TP3504
Adjust	VR3501
Input signal	REF VIDEO IN (75% Color Bar)
Mode	EE
M. Eq	Oscilloscope

Note: Confirm that the SCH for both of the VIDEO Input signal and REF VIDEO signal is 0°.

1. Connect the TP3503 to the CH1 and the TP3504 to the CH2 of the oscilloscope, respectively.
2. Adjust the VR3501 so that the leading edge of the pulse signal at TP3504 is the center of the SC signal of the TP3503, then relationship of A and B should be within the specication.
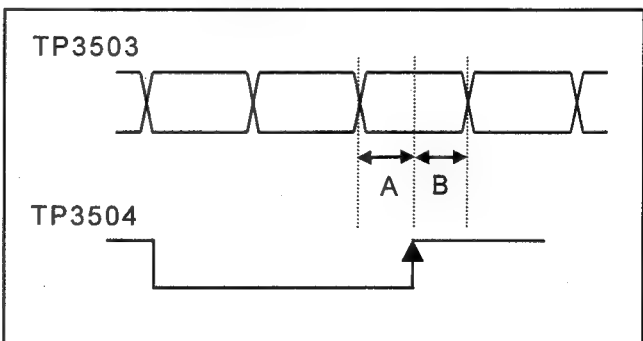
5-5. System Sub Carrier Phase Adjustment

Board	TBC
Spec.	0± 1°
Test	VIDEO OUT (CH B)、 REF IN (CH A)
Adjust	VR3508 (SYS SC PHASE)
Input signal	REF VIDEO IN (75% Color Bar)
Mode	EE
M. Eq	SCH meter

Note:

1. Set the waveform/vector monitor to the SCH mode, and REF to the EXT mode, respectively.
2. Observe the CH A (REF VIDEO IN), and adjust the SCH display position.

1. Connect the SCH meter to the REF IN and VIDEO OUT.
2. Adjust the VR3508 so that the phase of SCH synchronized between EXT REF IN signal and VIDEO OUT signal.

CH B
(VIDEO OUT)
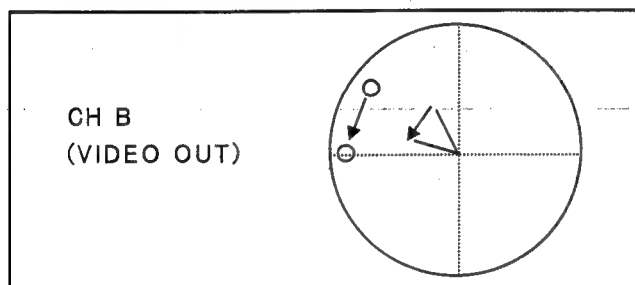
5-6. System H Phase Adjustment

Board	TBC
Spec.	See below figure.
Test	VIDEO OUT (CH B)、 REF IN (CH A)
Adjust	VR3504 (SYS H PHASE)
Input signal	REF VIDEO IN (75% Color Bar)
Mode	EE
M. Eq	WFM meter

1. Magnify the portion of the horizontal synchronizing signal of the VIDEO OUT signal and REF VIDEO IN signal, and adjust the VR3504 so that the phase syncronized of H sync between VIDEO OUT and REF INPUT signal as shown in figure.

Note: The measured waveform varies discretely. Shift the volume area rearward once (in the delay direction), and adjust it at the area to where it returns by reversing.

CH A
(REF VIDEO IN)

CH B
(VIDEO OUT)
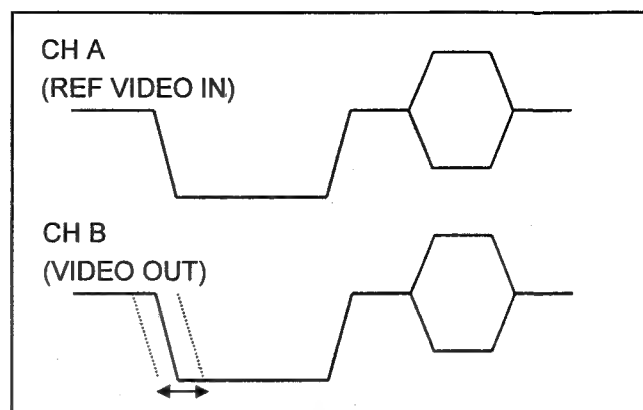
5-7. Burst Phase Adjustment

Board	TBC
Spec.	0 ± 1°
Test	VIDEO OUT (CH B)、 REF IN (CH A)
Adjust	<SYSTEM SET UP MENU> 03: SCH COARSE 04: SCH FINE
Input signal	REF VIDEO IN (75% Color Bar)
Mode	EE
M. Eq	SCH meter

Note:

1. Set the waveform/vector monitor to the SCH mode, and REF to the EXT mode, respectively.
2. Observe the CH A (REF VIDEO IN), and adjust the SCH display position.

1. Open the SYSTEM SET UP menu and select the item "03: SCH COARSE".
2. Press "PAUSE (+)" or "PLAY (-)" button so that the coarse adjust the burst phase of the CH B to 0 degree.
3. Next, select the item "04: SCH FINE", and press "PAUSE (+)" or "PLAY (-)" button so that the burst phase of the CH B is bebome 0 degree.

CH B
(VIDEO OUT)
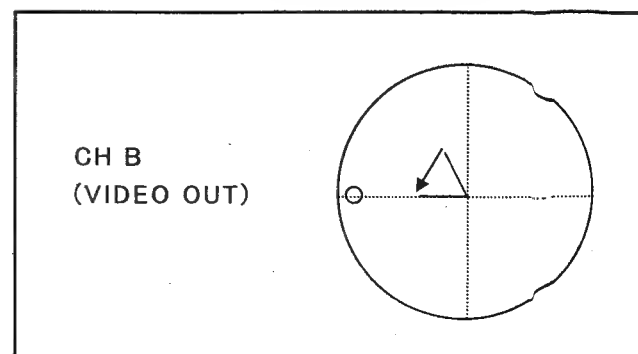
5-8. Video Position Adjustment

Board	TBC
Spec.	T= 13.8 ± 0.01μs
Test	VIDEO OUT
Adjust	F8:VIDEO PHASE(VIDEO ADJUST)
Input signal	REF IN (75%Color Bar)
Mode	PLAY
M. Eq	VFM3580KM (Pulse & Bar portion)
	Oscilloscope

1. Open the VIDEO ADJUST menu on the service menu, and select the "F85: VIDEO PHASE".
2. Press "PAUSE (+)" or "PLAY (-)" button so that the period T (between center of sync and center of 2T pulse) is within the specification.
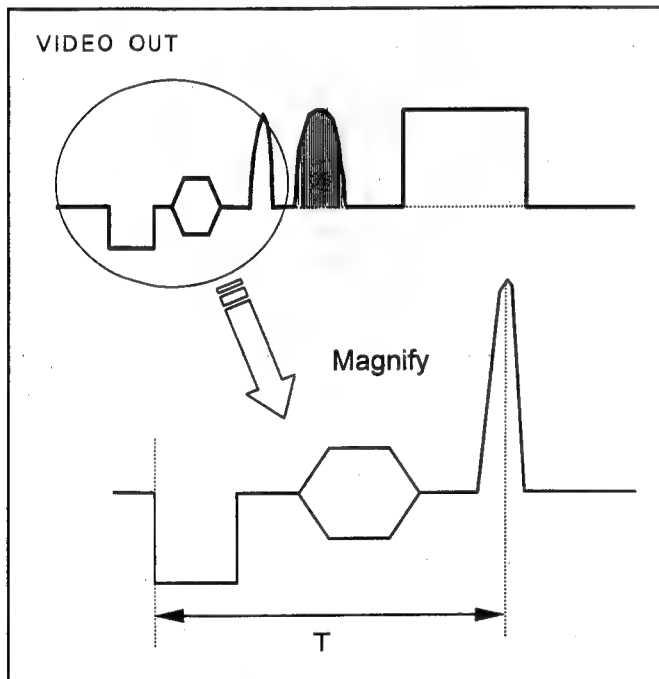
5-9. Y signal Timing Adjustment (1)

Board	TBC
Spec.	T= 13.8 ± 0.01μs
Test	VIDEO OUT
Adjust	VR3001 (SYNC 0)
Input signal	REF IN (75% Ciolor Bar)
Mode	PLAY
Tape	VFM3580KM (Pulse & Bar portion)
M. Eq	Oscilloscope

1. Open the "B00 MODE SELECT" menu on the service menu, and set the "B10 SHUFFLE EE" to the ON position.
2. Adjust the VR3001 so that the period T (between center of sync and center of 2T pulse) is within the specification.
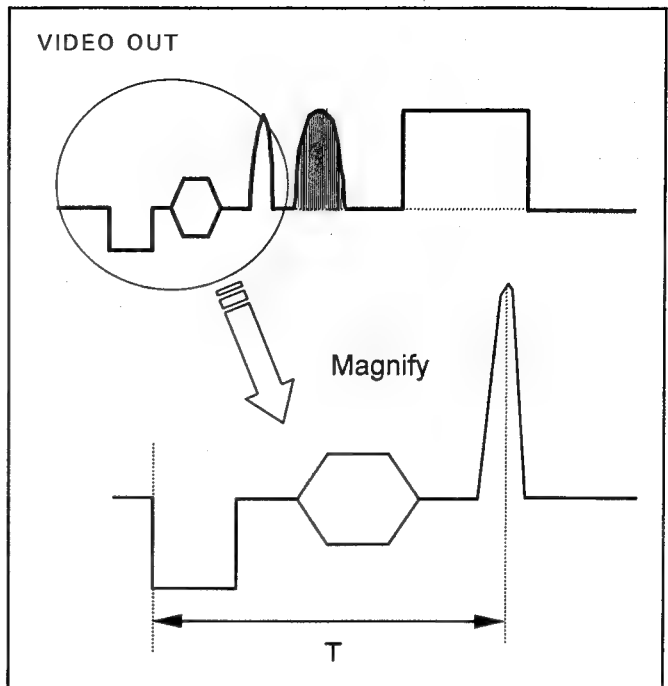
5-10. Y signal Timing Adjustment (2)

Board	TBC
Spec.	See below figure
Test	VIDEO OUT
Adjust	VR3001 (SYSC 0)
Input signal	VIDEO IN (75%Color Bar)
Mode	EE
Tape	------
M. Eq	Vector Scope

1. Set the INPUT SELECT SW to the LINE.
2. Open the "B00 MODE SELECT" menu on the service menu, and set the "B10 SHUFFLE EE" to the ON position.
3 Adjust VR3001 so that line of between Mg and G is became straight as shown in the figure below.

Note: Adjust VR3001 near the range at adjustment point by "Y signal timing adjustment (1)". In case of quantity of adjustment at VR3001 to much, perform the Y signal timing adjustment (1) again.

Adjust until this line becomes straight.
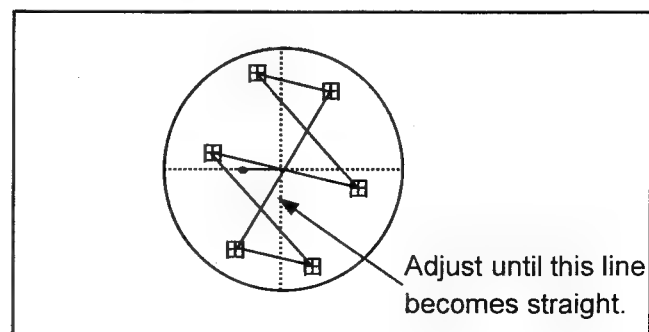
6. VIDEO I/O SECTION

6-1. Initial Setting

1. Be sure to set the VIDEO LEVEL, SET UP, and HUE CHROMA LEVEL on the System Set Up menu to 0 unless otherwise specified.
2. Warm up the VTR more than 10 minutes before perform adjustmen.
3. REF INPUT signal sholud be synchronized VIDEO INPUT signal.

6-2. Set Up Adjustment

Board	VIDEO I/O
Spec.	Set up level = Pedestal level ± 0.5 IRE
Test	VIDEO OUT
Adjust	VR30806
Input signal	------
Mode	PLAY
Tape	VFM3580KM (PULSE & Bar portion)
M. Eq	WFM Monitor

1. Adjust the VR30806 so that the set up level is equal to the pedestal level.

Note: As this signal has some carrier leak and noise etc, set the Y filter switch on WFM Monitor and magifled the gain.

Adjust set-up level as same as level as Pedestal level.

VIDEO OUT

SET UP
PEDESTAL
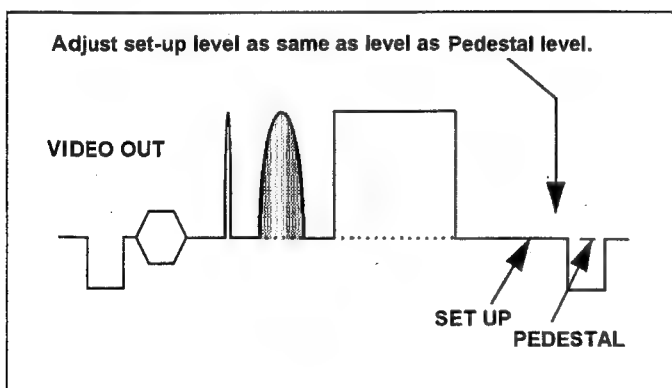
6-3. Carrier Balance Adjustment

Board	VIDEO I/O
Spec.	5 mV 以下
Test	VIDEO OUT
Adjust	VR30908 (PB BAL)、 VR30907 (PR BAL)
Input signal	------
Mode	PLAY
Tape	VFM3580KM (Pulse & Bar portion)
M. Eq	WFM Monitor

1. Use the WFM monitor in the single line sweep mode. Set the chroma filter to the ON, and maximize the gain.
2. Adjust VR30907 (PR BAL) and VR30908 (PB BAL) so that the carrier leak is minimum as shown in figure.

Note: Set the time axis to the MAG for the adjustment.

Magnify

Minimize
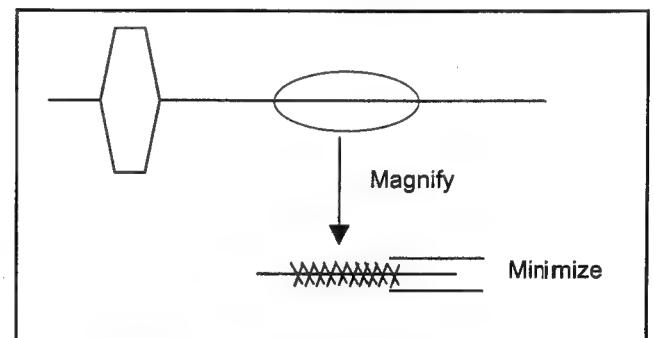
6-4. SYNC Level Adjustment

Board	VIDEO I/O
Spec.	40 IRE ± 1 IRE
Test	S-VIDEO (Y OUT)
Adjust	VR30805 (SYNC LEV)
Input signal	------
Mode	PLAY
Tape	VFM3580KM (75% Color Bar portion)
M. Eq	WFM Monitor

1. Adjust the VR30805 so that the sync level is within the specification.

Sync Level
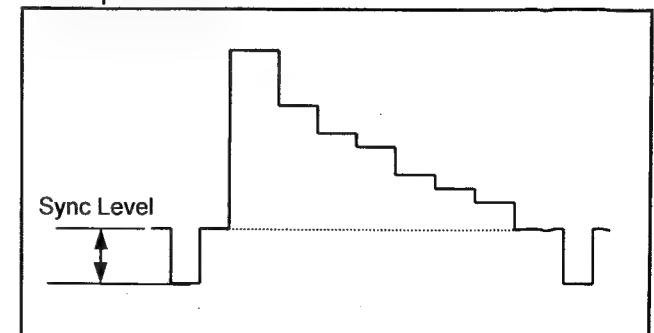
6-5. Y/C Y Level Adjustment

Board	VIDEO I/O
Spec.	100 IRE ± 2%
Test	S-VIDEO (Y OUT)
Adjust	VR30803 (V LEV OFST), VR30802 (VIDEO LEV FINE)
Input signal	------
Mode	PLAY
Tape	VFM3580KM (75%Color Bar portion)
M. Eq	WFM Monitor

1. Adjust VR30803(coarse) and VR30802(fine) so that the Y level is within the specification.

6-6. Composite Y Level Adjustment

Board	VIDEO I/O
Spec.	100 IRE ± 2%
Test	VIDEO OUT
Adjust	VR31102 (CPS LEV)
Input signal	------
Mode	PLAY
Tape	VFM3580KM (75% Color Bar portion)
M. Eq	WFM Monitor

1. Adjust the VR31102 so that the Y level is within the specification.
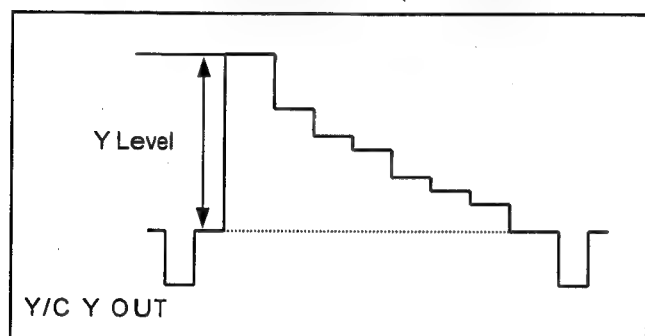
6-7. Burst Level Adjustment

Board	VIDEO I/O
Spec.	40 IRE ± 1 IRE
Test	VIDEO OUT
Adjust	VR30906 (BURST LEV)
Input signal	------
Mode	PLAY
Tape	VFM3580KM (75% Color Bar portion)
M. Eq	WFM Monitor

1. Connect the WFM monitor to the VIDEO OUT output.
2. Adjust the VR30906 so that the portion A (burst level) is within the specification.
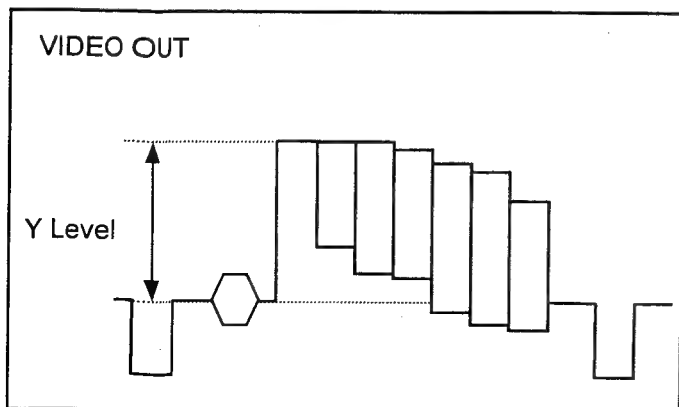
6-8. Vector Adjustment

Board	VIDEO I/O
Spec.	All vector are in the inner boxes
Test	VIDEO OUT
Adjust	VR31002(QUAD), VR31001(HUE OFS) VR30904(ENC BY),VR30903(ENC RY)
Input signal	------
Mode	PLAY
Tape	VFM3580KM (75% Color Bar portion)
M. Eq	Vector scope

1. Connect the VIDEO OUT to the vector scope. And set the burst position by adjust phase of the vector scope.
2. Adjust the VR31002, VR31001,VR30904, and VR30903 so that each vector point in the inner boxes of the vector scope.
   - VR31002: Diagonal direction
   - VR31001: Rotating direction
   - VR30904: Horizontal direction
   - VR30903: Vertical direction
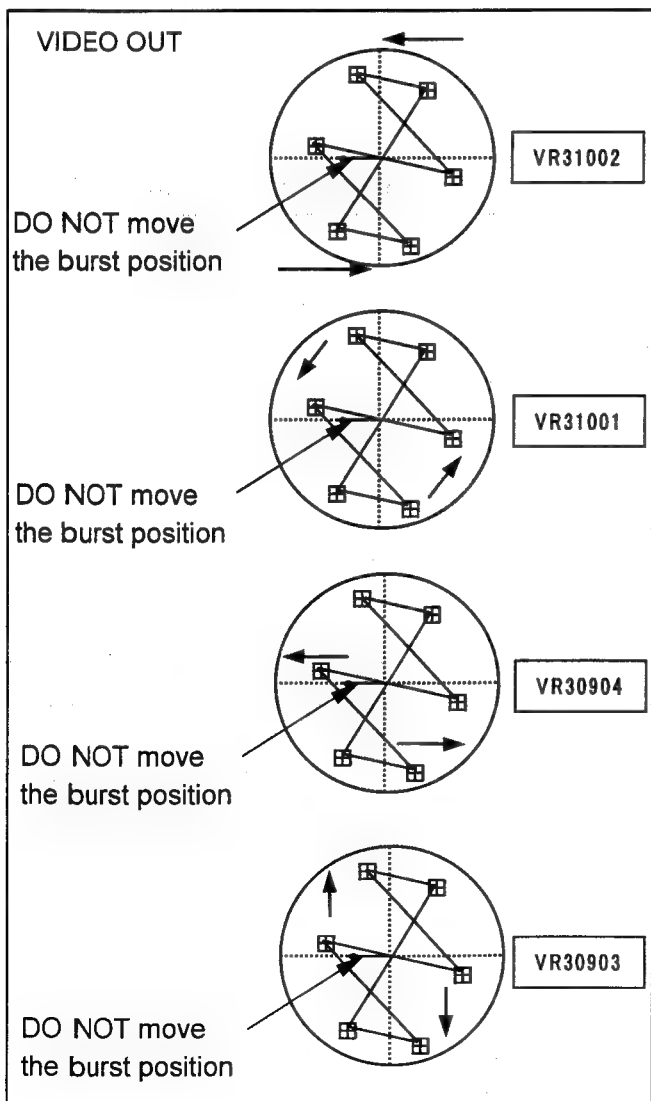
6-9. Vector Adjustment (R-Y TIMING)

Board	VIDEO I/O
Spec.	The line is become straight between Mg and G. And it vector point of Mg and G in the inner boxes.
Test	VIDEO OUT
Adjust	VR30901(RY DLY)
Input signal	------
Mode	PLAY
Tape	VFM3580KM (75% Color Bar portion)
M. Eq	Vector scope

1. Connect the VIDEO OUT to the vector scope. And set the burst position by adjust phase of the vector scope.
2. Adjust VR30901 so that line of between Mg and G is became straight line as shown in the figure below.
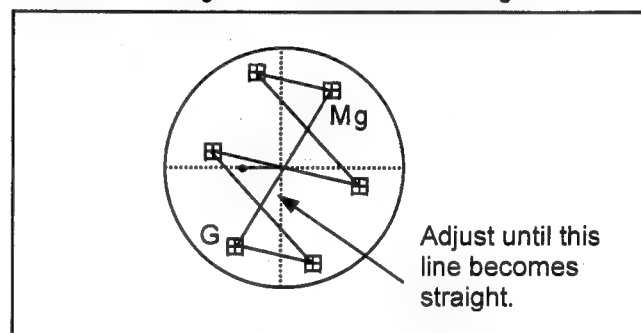
6-10. Y f Special Adjustment

Board	VIDEO I/O
Spec.	4.5MHz= 0 ± 2%
Test	VIDEO OUT
Adjust	VR30804 (CPS FREQ)
Input signal	------
Mode	PLAY
Tape	VFM3580KM (H sweep portion)
M. Eq	WFM Monitor

1. Observe the Y signal portion of the VIDEO OUT signal on the WFM monitor, and adjust VR30804 so that the frequency characteristic becomes flat.
   1) Adjust until the 4.5 MHz level is 98 to 102%.
   2) The level at the center of the frequency is 100%.
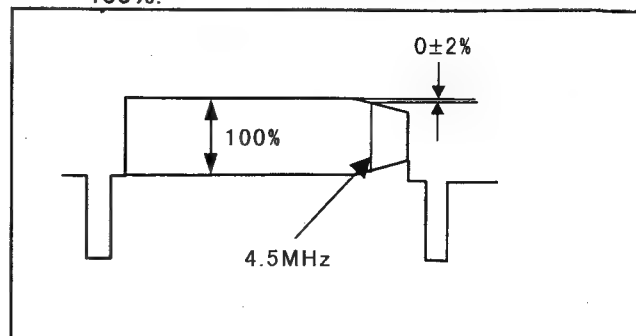
6-11. Composite YC Timing Adjustment

Board	VIDEO I/O
Spec.	0 ± 10ns
Test	VIDEO OUT
Adjust	VR30910 (C DLY)
Input signal	------
Mode	PLAY
Tape	VFM3580KM (Pulse & Bar portion)
M. Eq	WFM Monitor

1. Connect the WFM monitor to the VIDEO OUT.
2. Adjust the VR30910 so that the hatching portion is symmetrical as shown in figure.
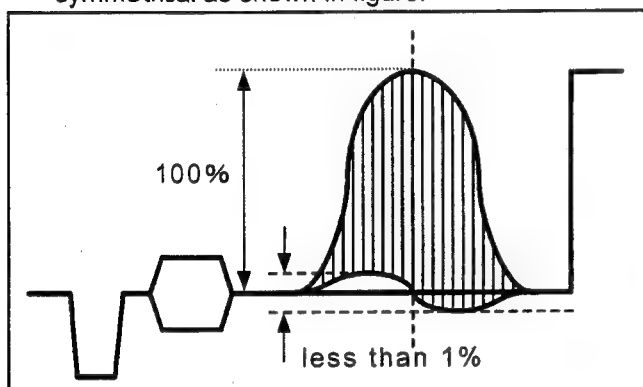
< Note >
1. After the adjustment is complete, perform the "6-7. Burst Level Adjustment" and "6-8. Vector Adjustment".
2. Set the item "08:CHROMA LEVEL" on the System Set Up menu to 0 after the adjustment is complete.

6-12. RSTW Adjustment

Board	VIDEO I/O
Spec.	0 ± 100nsec
Test	TP30601(BGP),TP30502(AD PB)
Adjust	VR30601(RSTW)
Input signal	VIDEO IN (75% Color Bar)
Mode	EE
Tape	------
M. Eq	Oscilloscope

1. Adjust the VR30601 so that the burst portion of TP30601 is syncronized to center of PB blanking pulse at TP30502 as shown in figure.
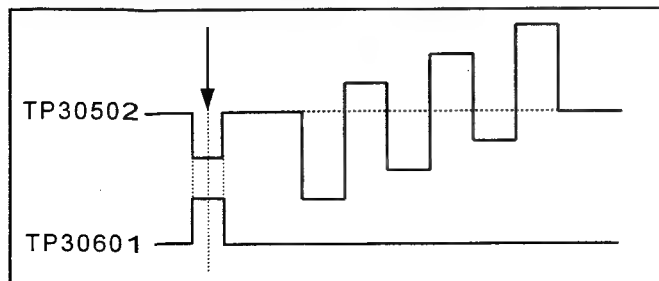
6-13. OSD Character Position Adjustment

Board	VIDEO I/O
Spec.	T= 6.0 ± 0.2 μsec
Test	VIDEO MONITOR OUT
Adjust	VC31101(CHAR)
Input signal	VIDEO IN (50% flat field)
Mode	EE
Tape	------
M. Eq	WFM Monitor

1. Open the Basic Set Up menu and set the item "004: CHARA TYPE" to "WHITE".
2. Adjust the VC31101 so that the period T is within the specification.
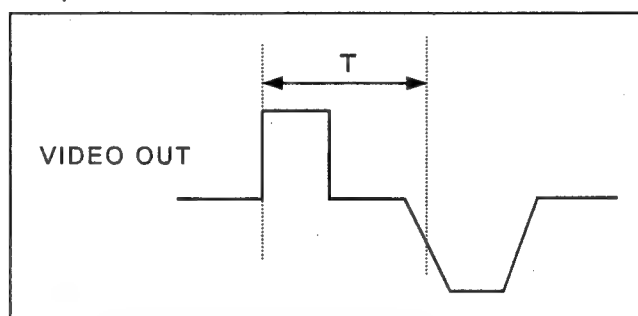
6-14. PR/PB Signal Balance Adjustment

Board	VIDEO I/O
Spec.	Less than 8 mV
Test	VIDEO OUT
Adjust	VR30507 (PR CLAMP DC), VR30508 (PB CLAMP DC)
Input signal	VIDEO IN (50% flat field)
Mode	EE
Tape	------
M. Eq	WFM Monitor

1. Use the WFM monitor in the single line sweep mode. Set the chroma filter to the ON, and maximize the gain.
2. Adjust VR30507 (PR CLAMP DC) and VR30508 (PB BAL) so that the carrier leak is minimum as shown in figure.

Note: Set the time axis to the MAG for the adjustment.
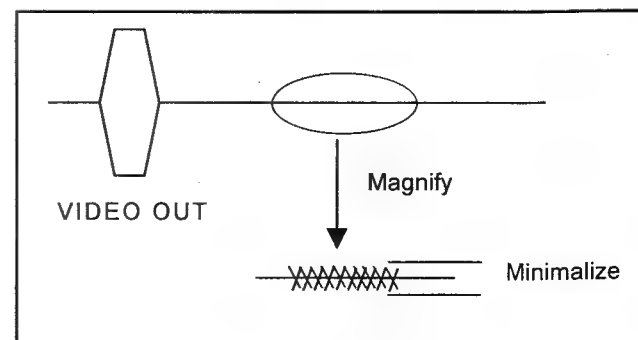
6-15. AD Y Clamp Level Adjustment

Board	VIDEO I/O
Spec.	Set up level = Pedestal level ± 0.5 IRE
Test	VIDEO OUT
Adjust	VR30509 (Y CLAMP DEC)
Input signal	VIDEO IN (0% flat field)
Mode	EE
Tape	-------
M. Eq	WFM Monitor

1. Open the "B00: MODE SELECT" menu on Service menu and set the item "B10: SHUFFLE EE" to ON.
2. Adjust the VR30509 so that the set up level is equal to the pedestal level.
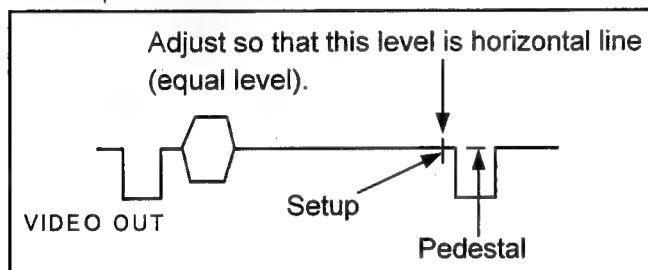
Adjust so that this level is horizontal line (equal level).

VIDEO OUT

Setup

Pedestal

Note: As this signal has some carrier leak and noise etc, set the Y filter switch on WFM Monitor and magified the gain

6-16. AD Y Input Level Adjustment (Y/C)

Board	VIDEO I/O
Spec.	100 ± 1 IRE
Test	VIDEO OUT
Adjust	VR30506 (AD Y)
Input signal	S-VIDEO IN (75% Color Bar)
Mode	EE
Tape	-------
M. Eq	WFM Monitor

1. Open the "B00: MODE SELECT" menu on Service menu and set the item "B10: SHUFFLE EE" to ON.
2. Adjust the VR30506 so that the Y level is within the specification.

Adjust the level within the specifcation.
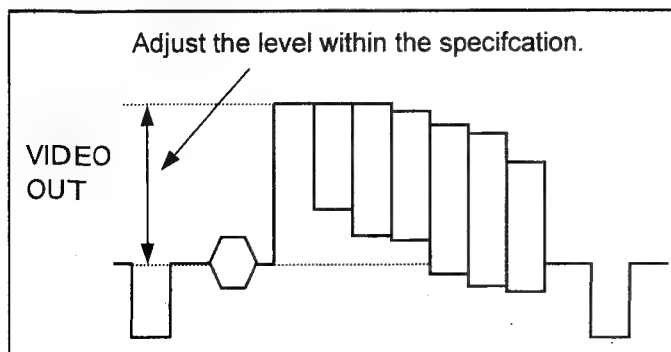
VIDEO OUT

6-17. Record Chroma Adjustment (Y/C)

Board	VIDEO I/O
Spec.	All vector are in the inner boxes
Test	VIDEO OUT
Adjust	VR30603 (AXIS),VR30505 (AD PB), VR30504 (AD PR)
Input signal	S-VIDEO IN (75% Color Bar)
Mode	EE
Tape	-------
M. Eq	Vector scope

1. Open the "B00: MODE SELECT" menu on Service menu and set the item "B10: SHUFFLE EE" to ON.
2. Adjust the VR30603, VR30505, and VR30504 so that each point of vector in the inner boxes of vector scope.

DO NOT move the burst position.
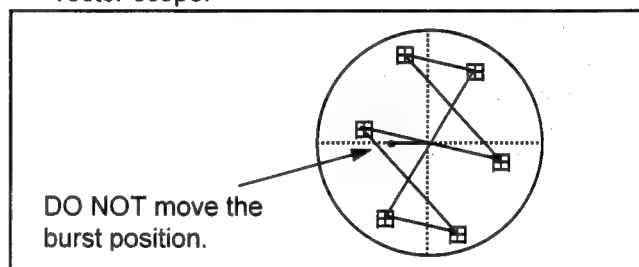
Note: The adjustment of playback process should be completed.

6-18. AD Y Input Level Adjustment (CPS)

Board	VIDEO I/O
Spec.	100 ± 1 IRE
Test	VIDEO OUT
Adjust	F03: CPS Y LEV(VIDEO ADJUST)
Input signal	VIDEO IN (75% Color Bar)
Mode	EE
Tape	-------
M. Eq	WFM Monitor

1. Open the "B00: MODE SELECT" menu on the service menu, and set the item "B10: SHUFFLE EE" to the ON.
2. Next, select the open the "F00: VIDEO ADJUST", and select the item "F03: CPS Y LEV".
3. Press "PAUSE (+)" or "PLAY (-)" button so that the Y level is within the specification.

Adjust the level within the specification.
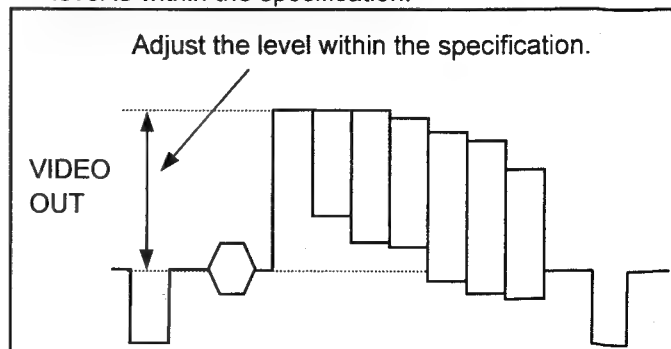
VIDEO OUT

6-19. Record Chroma Adjustment（CPS）

Board	VIDEO I/O
Spec.	All vector are in the inner boxes
Test	VIDEO OUT
Adjust	F02：CPS AXIS OFS(VIDEO ADJUST) F04：C LEV(VIDEO ADJUST)
Input signal	VIDEO IN (75% Color Bar)
Mode	EE
Tape	-------
M. Eq	Vector scope

1. Open the "B00: MODE SELECT" menu on the Service menu, and set the item "B10: SHUFFLE EE" to the ON.
2. Next, open the "F00: VIDEO ADJUST" menu and select the item "F02: CPS AXIS OFS".
3. Press "PAUSE (+)" or "PLAY (-)" button so that all vector points in inner boxes of vector scope.
4. Next, select the item "F04:C LEV". And press "PAUSE (+)" or "PLAY (-)" button so that all vector points in inner boxes of vector scope.

DO NOT move the burst position.
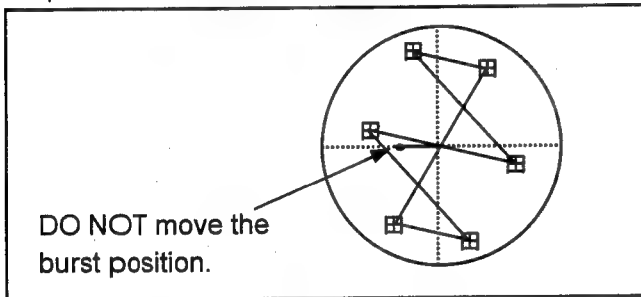
Note: The adjustment of playback process should be completed.

6-20. EE Y Level Adjustment

Board	VIDEO I/O
Spec.	100 ± 1 IRE
Test	VIDEO OUT
Adjust	VR30801 (EE Y LEV)
Input signal	VIDEO IN (75% Color Bar)
Mode	EE
Tape	-------
M. Eq	WFM Monitor

1. Connect the WFM monitor to the VIDEO OUT.
2. Adjust the VR30801 so that the Y level of the video signal is within the specification.

Adjust the level within the specified range.
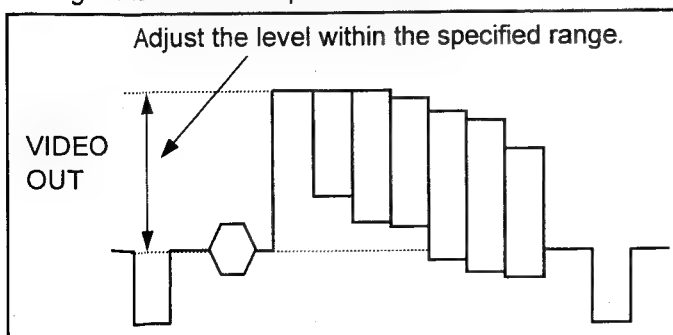
VIDEO OUT

6-21. EE Chroma Adjustment

Board	VIDEO I/O
Spec.	All vector are in the inner boxes
Test	VIDEO OUT
Adjust	VR31101 (EE C LEV)
Input signal	VIDEO IN (75% Color Bar)
Mode	EE
Tape	-------
M. Eq	Vector scope

1. Connect the vector scope to the VIDEO OUT.
2. Adjust the VR31101 so that the all vectors point are in the inner boxes.

DO NOT move the burst position.
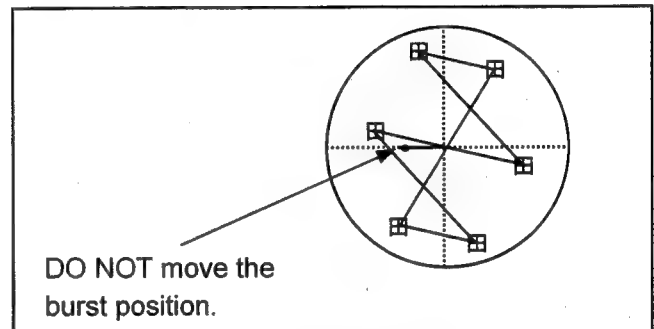
Note: The adjustment of playback process should be completed.

6-22. VV Clamp Potential Adjustment

Board	VIDEO I/O
Spec.	0 ± 0.5 IRE
Test	VIDEO OUT
Adjust	F18:VV CLAMP DC (VIDEO ADJUST)
Input signal	------
Mode	PLAY
Tape	VFM3580KM (75% Color Bar portion)
M. Eq	WFM Monitor

1. Open the "F00: VIDEO ADJUST" menu on Service menu and select the item "F18: VV CLAMP DC".
2. Press "PAUSE (+)" or "PLAY (-)" button so that the pedestal level of 11H line (it located after V SYNC and equlizing pluse) is the sams as pedestal level as other line.

Pedestal in this area
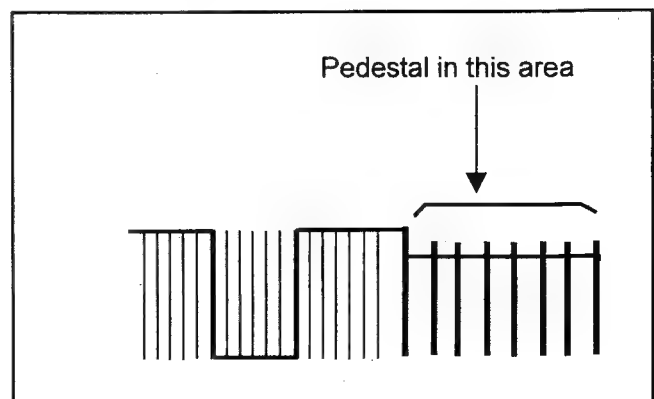
6-23. EE Clamp Potential Adjustment

Board	VIDEO I/O
Spec.	0 ± 0.5 IRE
Test	VIDEO OUT
Adjust	F17:EE CLAMP DC(VIDEO ADJUST)
Input signal	VIDEO IN (75% Color Bar)
Mode	EE
Tape	-------
M. Eq	WFM Monitor

1. Open "F00: VIDEO ADJUST" menu on Service menu and select the itemn "F17: EE CLAMP DC".
2. Press "PAUSE (+)" or "PLAY (-)" button so that the same pedestal level, when the VIDEO IN cable is disconnected and VIDEO IN cable is connected.
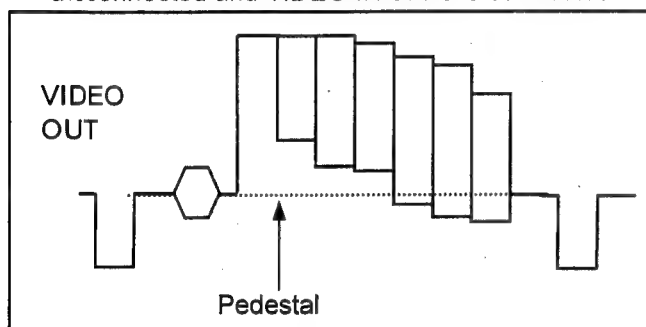
6-24. SCH Detection Adjustment

Board	VIDEO I/O
Spec.	See below figure
Test	TP30607
Adjust	VR30602 (SCH), VR30604 (SCH P)
Input signal	VIDEO IN (SCH±70°)
Mode	EE
Tape	-------
M. Eq	WFM Monitor

1. Set the SCH is -70° of SCH signal generator.
2. Slowly turn the VR30602 counterclockwise until the TP30607 is changed from "H" to "L".
3. Set the SCH is +70° of SCH signal generator.
4. Slowly turn the VR30604 counterclockwise until the TP30607 is changed from "H" to "L".

Note:
1. When turning the VR counterclockwise, be sure to turn it slowly.
2. Be sure to perform the adjustment in the direction that the TP30607 is changed from the "H" to the "L".

6-25. AD Y PR Timing Adjustment

Board	VIDEO I/O
Spec.	See bolow
Test	TP30501 (AD PR) TP30503 (AD Y)
Adjust	VR30402 (PR TMG1)
Input signal	Modulation 12.5T Pulse & Bar
Mode	EE
Tape	------
M. Eq	Oscilloscope

1. Set the oscilloscope to the CH2 INVERT mode (TP30501), and the CH1/CH2 ADD mode.
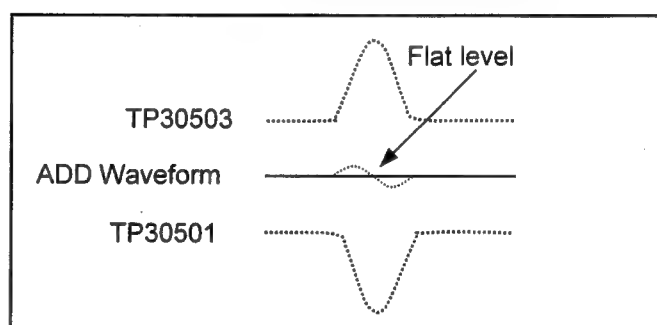
2. Adjust the VR30402 until the ADD signal becomes flat.

6-26. AD Y PB Timing Adjustment

Board	VIDEO I/O
Spec.	See below
Test	TP30502 (AD PB) TP30503 (AD Y)
Adjust	VR30401 (PB TMG1)
Input signal	Modulation 12.5T Palse & Bar
Mode	EE
Tape	-------
M. Eq	Oscilloscope

1. Set the oscilloscope to the CH2 INVERT mode (TP30502), and the CH1/CH2 ADD mode.
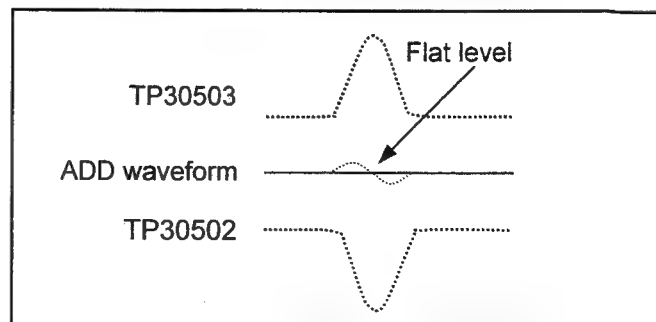
2. Adjust the VR30401 until the ADD signal becomes flat.

6-27. Set Up Level Adjustment (1)

Board	VIDEO I/O
Spec.	SETUP LEVEL = 7.5 ± 0.5 IRE
Test	VIDEO OUT
Adjust	F14:SET UP ADD (VIDEO ADJUST)
Input signal	------
Mode	PLAY
Tape	VFM3580KM(75% Color Bar portion)
M. Eq	WFM Monitor

1. Open the "F00: VIDEO ADJUST" menu on Service menu and select the item "F14: SET UP ADD".
2. Press "PAUSE(+)" or "PLAY (-)" button so that the set up level is within specification.

VIDEO OUT
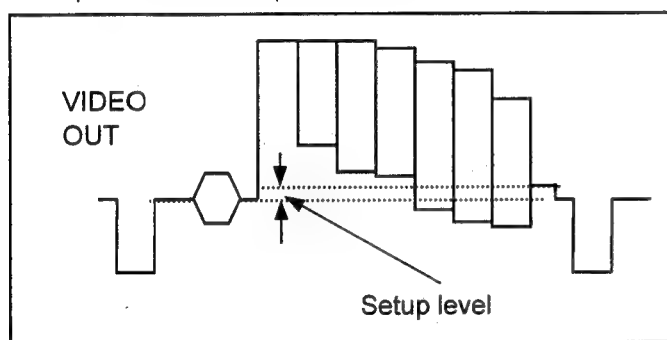
Setup level

6-28. Set Up Level Adjustment (2)

Board	VIDEO I/O
Spec.	Y = 100 ± 1 IRE
Test	VIDEO OUT
Adjust	F15:V LEV ADD(VIDEO ADJUST)
Input signal	------
Mode	PLAY
Tape	VFM3580KM(75% Color Bar portion)
M. Eq	WFM Monitor

1. Open the "F00: VIDEO ADJUST" menu on Service menu and select the item "F15: V LEV ADD".
2. Press "PAUSE(+)" or "PLAY (-)" so that the video level is within the specification.

Y
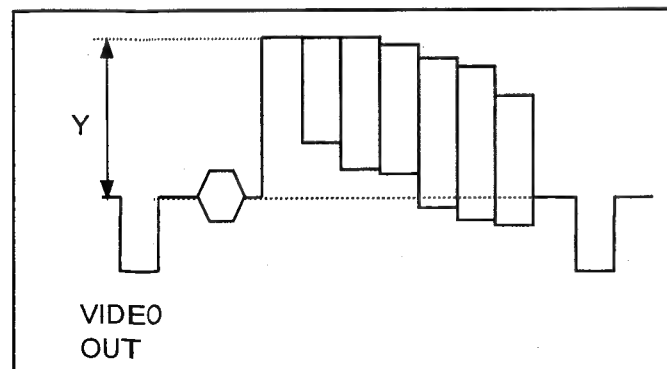
VIDEO OUT

6-29. Record Set Up Cut Adjustment （1）

Board	VIDEO I/O
Spec.	SETUP LEVEL = 7.5 ± 0.5 IRE
Test	VIDEO OUT
Adjust	F16:Y CLAMP OUT(VIDEO ADJUST)
Input signal	VIDEO IN (75% Color Bar)
Mode	EE
Tape	------
M. Eq	WFM Monitor

1. Open the "B00: MODE SELECT" menu on the Service menu, and set the item "B10: SHUFFLE EE" to ON.
2. Open the "F00: VIDEO ADJUST" menu and select the item "F16: Y CLAMP CUT".
3. Press "PAUSE(+)" or "PLAY (-)" button so that the set up level is within specification.

VIDEO OUT

Setup level
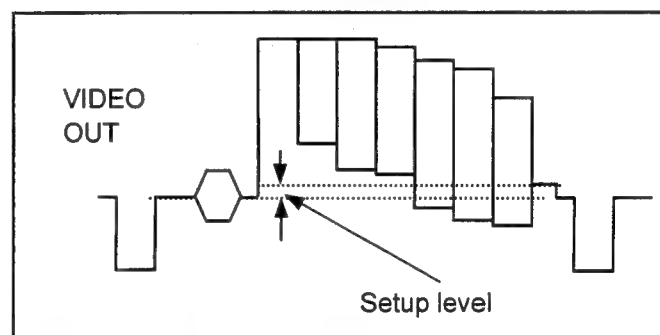
6-30. Record Set Up Cut Adjustment （2）

Board	VIDEO I/O
Spec.	Y＝100 ± 1 IRE
Test	VIDEO OUT
Adjust	VR30501
Input signal	VIDEO IN (75% Color Bar)
Mode	EE
Tape	------
M. Eq	WFM Monitor

1. Open the "B00: MODE SELECT" menu on the service menu, and set the item "B10: SHUFFLE EE" to ON.
2. Adjust VR30501 so that the video level is within the specification.

Y
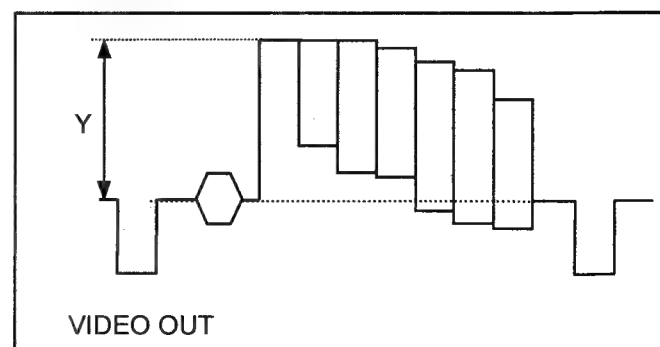
VIDEO OUT

6-31. Record Set Up Cut Adjustment （3）

Board	VIDEO I/O
Spec.	All vector are in the inner boxes
Test	VIDEO OUT
Adjust	VR30502
Input signal	VIDEO IN (75% Color Bar)
Mode	EE
Tape	------
M. Eq	Vector scope

1. Open the "B00: MODE SELECT" menu on the service menu, and set the item "B10: SHUFFLE EE" to the ON.
2. Adjust the VR30502 so that the all vectors point are in inner boxes on vector scope.

DO NOT move the burst position.
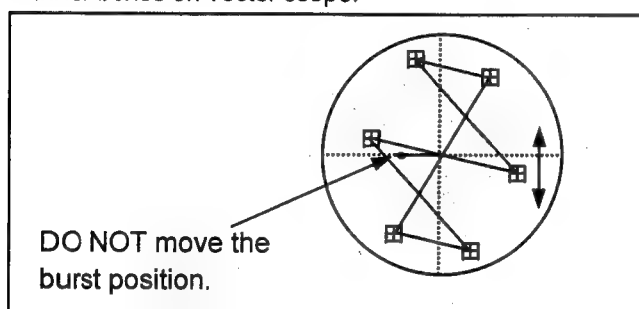
Note: The adjustment of playback process should be completed.

6-32. Record Set Up Cut Adjustment （4）

Board	VIDEO I/F
Spec.	All vector are in the inner boxes
Test	VIDEO OUT
Adjust	VR30503
Input signal	VIDEO IN (75% Color Bar)
Mode	EE
Tape	------
M. Eq	Vector scope

1. Open the "B00: MODE SELECT" menu on the service menu, and set the item "B10: SHUFFLE EE" to ON.
2. Adjust VR30503 so that the all vectors point in inner boxes on vector scope.

DO NOT move the burst position.
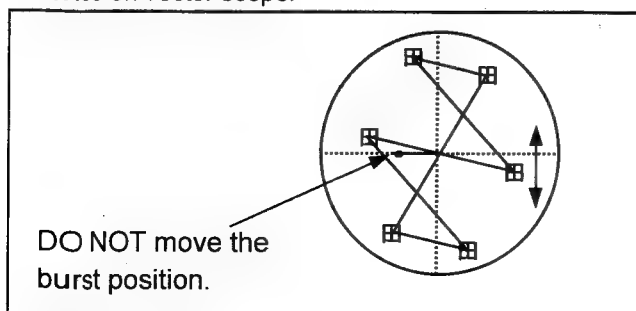
Note: The adjustment of playback process should be completed.

7. AUDIO SECTION

7-1. Initial Setting of Audio Adjustment

1. Set the item "102:S/F/R " on SET UP MENU TO "EE".
2. Please warm up the VTR about 10 minute before adjustment.
3. Set the REC VR to center position and set the CONTROL SW to LOCAL position on the Front Panel.
4. In case of use Audio Precision, please set switch of impedance as indicated as below.
   - ● OSC Output Impedance:" Less than 25Ω (Low)"
   - ● Input Impedance : "more than 100KΩ (High)".

7-2. Output Level Adjustment

Board	AUDIO
Spec.	−8 dBV± 0.2 dB
Test	LINE OUT 1,2 (CH 1,CH 2)
Adjust	VR40201 (CH 1), VR40202 (CH 2)
Input signal	------
Mode	PLAY
Tape	VFM3580KM
M.Eq	VTVM (Audio Precision)

1. Adjust VR40201(CH1) and VR40202(CH2) so that the output level (LINE OUT 1) is become in the specification.
2. Confirm that the output level of LINE OUT 2 in the specisication.

7-3. Input Level Adjustment

Board	AUDIO
Spec.	−22.6 dBV± 0.2 dBV
Test	TP40004 (CH 1) TP40005 (CH 2)
Adjust	VR40003 (CH 1), VR40004 (CH 2)
Input Signal	LINE IN (1KHz,−8dB: Sinewave)
Mode	EJECT
Tape	------
M.Eq	VTVM (Audio Precision)

1. Adjust VR40003(CH1) and VR40005(CH2) so that the level of Test Point is becomes in the specification.

NOTE: Set the REC VR to center(click) posito n.

7-4. EE Level Adjustment

Board	AUDIO
Spec.	−8 dBV± 0.2 dB
Test.	LINE OUT (CH 1,2)
Adjust	VR40301 (CH 1), VR40302 (CH 2)
Input Signal	LINE IN (1KHz、 -8dB sinewave)
Mode	EJECT
Tape	------
M.Eq	VTVM (Audio Precision)

1. Adjust VR40301(CH1) and VR40302(CH2) so that the Output level is becomes in the specification.

NOTE : Please perform this adjustment after " 7-2.Output Level Adj." and " 7-3.Input Level Adj.

7-5. Level Meter Adjustment

Board	AUDIO
Spec.	AUDIO METER DISPLAY:−20dB
Test	------
Adjust	VR40303 (CH 1), VR40304 (CH 2)
Input Signal	LINE IN (1KHz、 -8dB sinewave)
Mode	EE
Tape	------
M.Eq	------

1. Adjust VR40303 and VR40304 so that the Audio Level Meter displayed −20dB position.

7-6. Initial Setting of CUE AUDIO Adj.

1. Set the bit 2 of Dip SW 902 on the AV SYSCON P.C.Board to ON position.
2. Set the "LOCAL/MENU/REMOTE" switch on the Front panel to "MENU" position for open the Service Menu.
3. Keep Pressing "END" button, press "AUDIO SELECT" button, then CH1 and CH2 indicator put out light on Audio Level Meter for CUE Audio signal output from LINE OUT terminal.
NOTE: In case of CH1 and CH2 indicator displayed, when release the END button, press END button again, then if CH1 and CH2 indicator become put out light condition, it no problem..
4. For operate VTR, keep pressing END button, press operation button (PLAY,FF etc).
5. After finish CUE AUDIO adjustment, please escape from Service menu mode.

7-7. CUE AUDIO PB LEVEL Adj.

Board	AUDIO
Spec.	−8 dBV± 0.5 dB
Test	LINE OUT (CH1.CH2)
Adjust	VR40701
Input Signal	------
Mode	PLAY
Tape	VFM3580KM (0 to 14 min)
M.Eq	VTVM (Audio Precision)

1. Adjust VR40701 so that the LINE OUT output level is become in the specification.

7-8. CUE AUDIO BIAS CURRENT Adj.

Board	AUDIO
Spec.	6.5 mVrms ± 0.2 mV
Test	TP40601 (HOT) TP40602 (COLD)
Adjust	VR40601
Input Signal	------
Mode	REC
Tape	------
M.Eq	VTVM

1. Connect the VTVM between TP40601 (HOT) and TP40602 (COLD).
2. Adjust VR40601 so that the level at test point in the specification.

7-9. CUE REC/PB Level Adjustment

Board	AUDIO
Spec.	−8 dBV± 1.0 dB
Test	LINE OUT (CH1,2) TP40603
Adjust	VR40602
Input Signal	LINE IN (−8 dB,1KHz sinewave)
Mode	REC / PLAY
Tape	Blank Tape
M.Eq	VTVM (Audio Precision)

1. Supply a 1KHz, -8dB signal into the LINE Input and record the input signal for a few minutes.
2. Playback the just recorded portion.
3. Measure the level at LINE OUT and confrm that level difference to −8 dB.
4. Place unit into REC mode for a few minutes and playback the just recorded portion.
5. Adjust VR40602 so that the LINE OUT level is in the specification.

NOTE: In case of use Audio Precision, set indicated as below.
   * AMPLITUDE
   * BANDWIDTH　　: 22Hz、22KHz
   * FILTER: OFF

SECTION 5

BLOCK DIAGRAMS

CONTENTS

BLOCK DIAGRAMS

CONTENTS

OVERALL BLOCK DIAGRAM

BLK—1
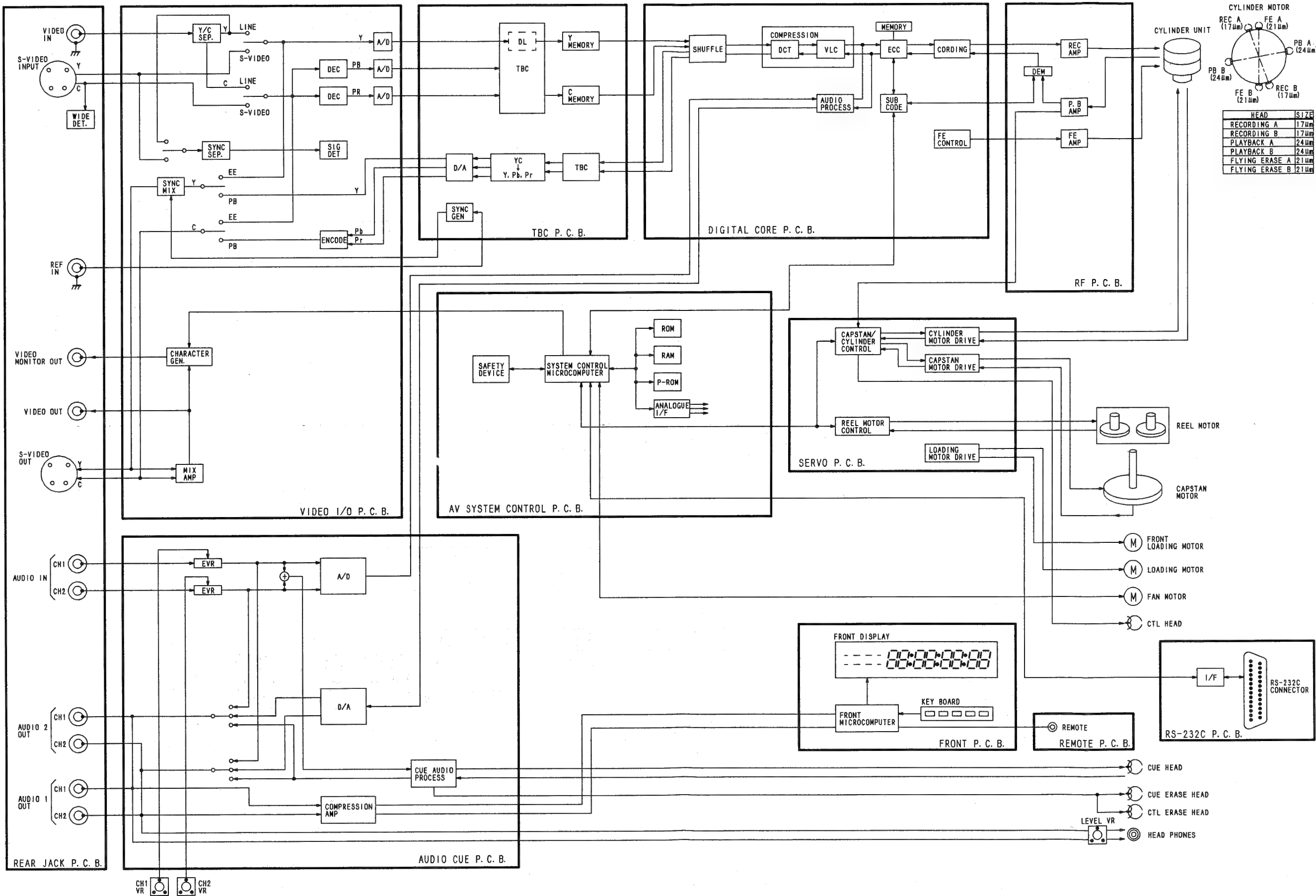
FRONT BLOCK DIAGRAM
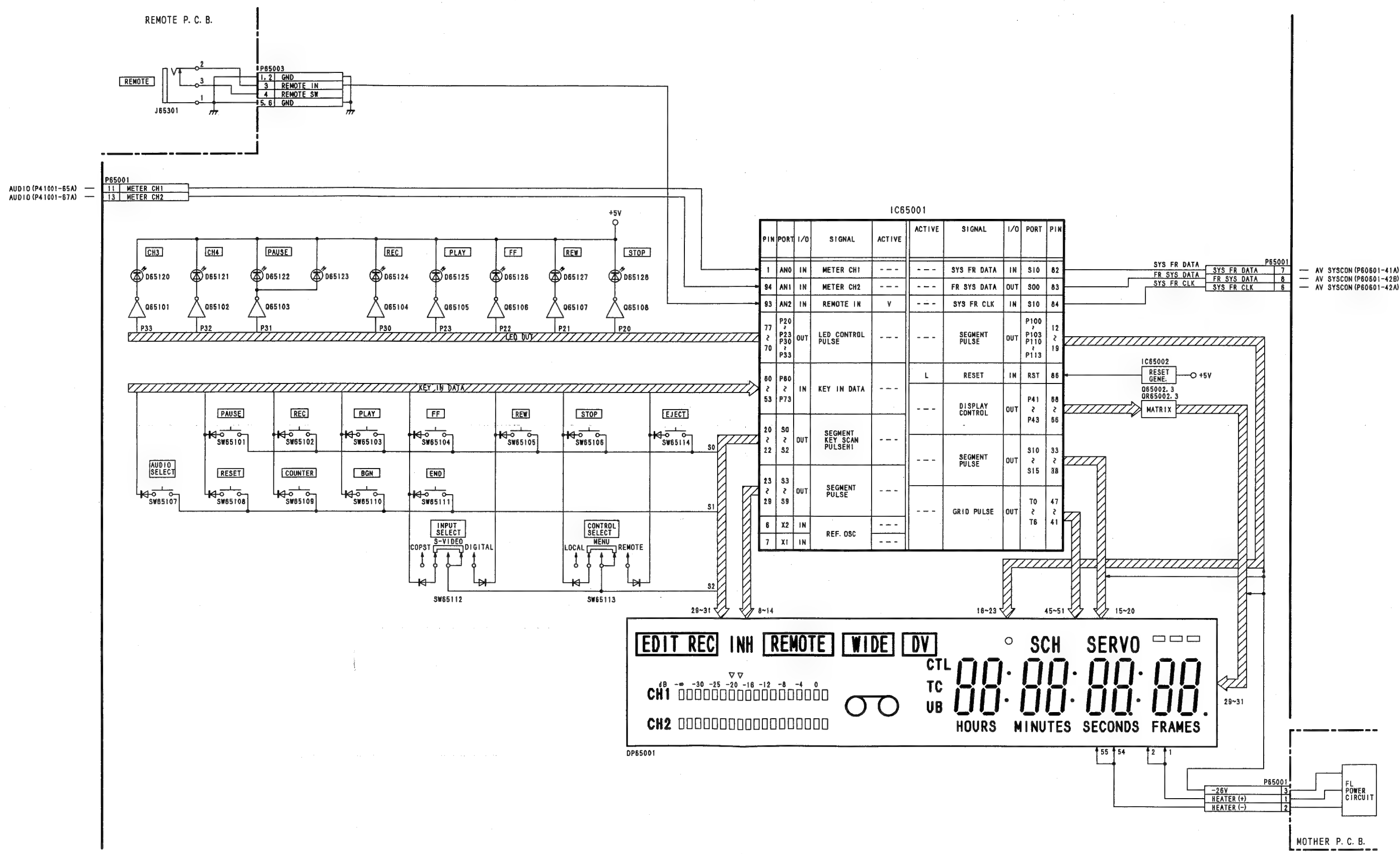
RF BLOCK DIAGRAM
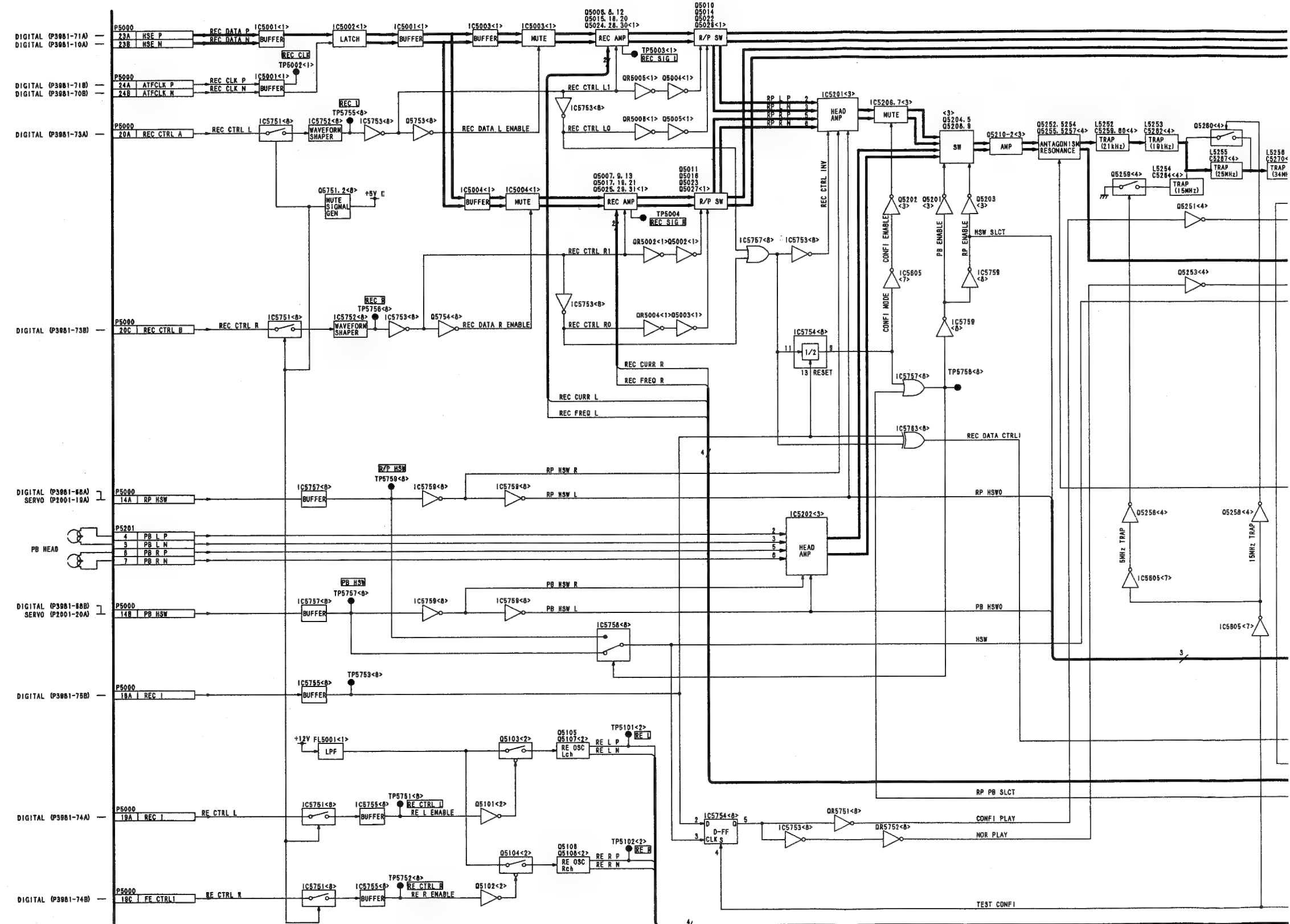
SERVO BLOCK DIAGRAM
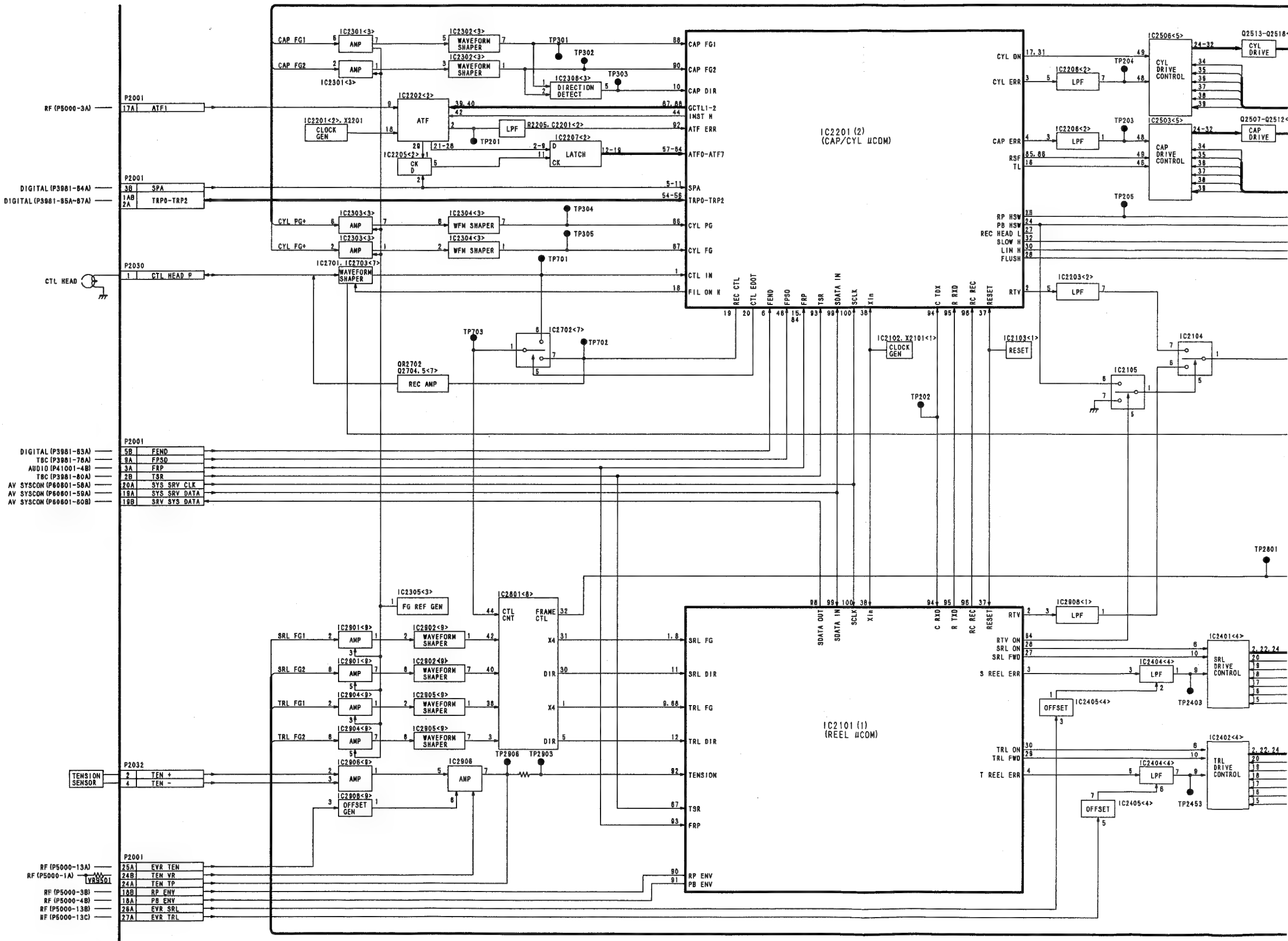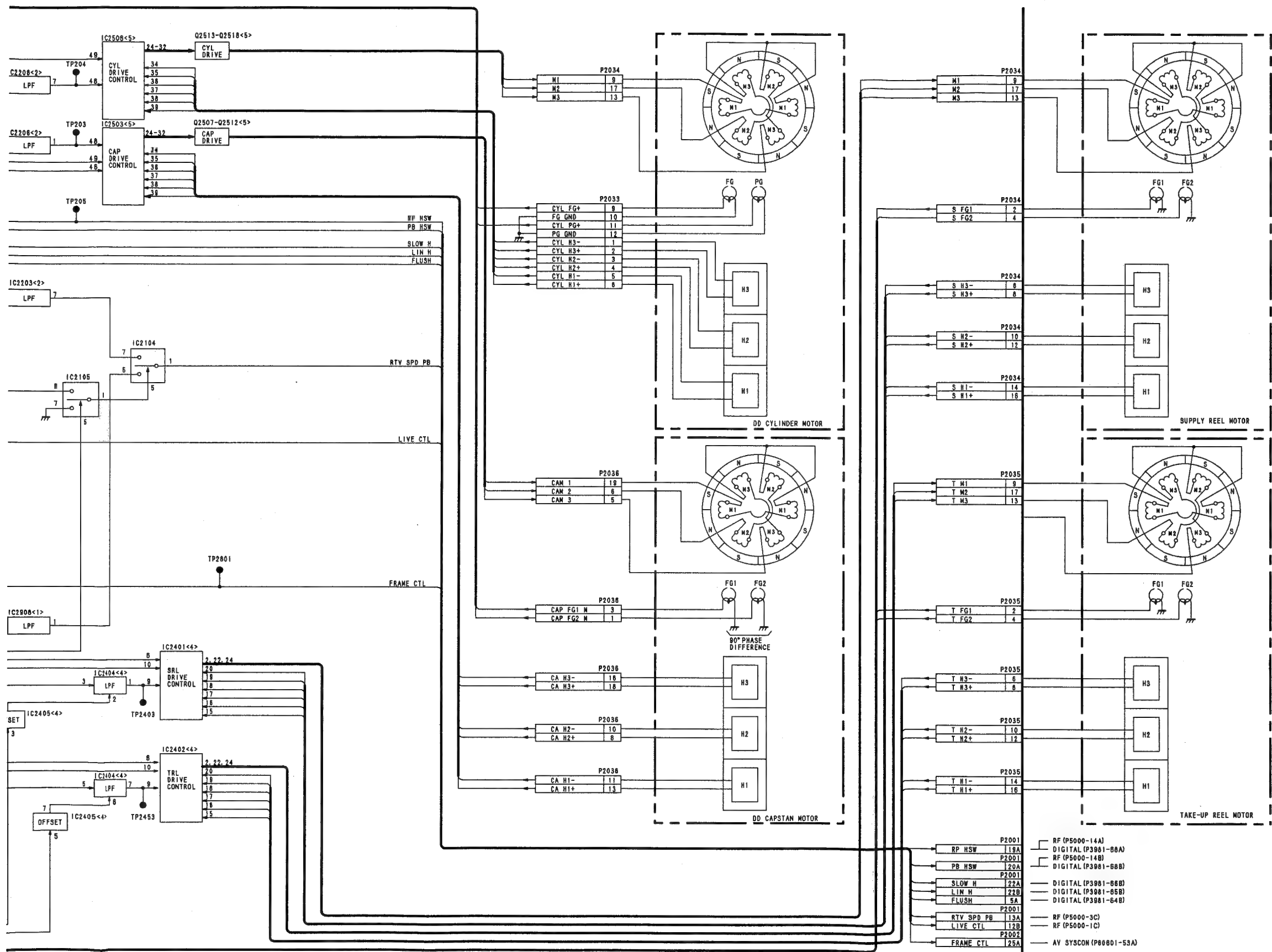
AUDIO BLOCK DIAGRAM

Ref No : 40000 Series.

BLK—5
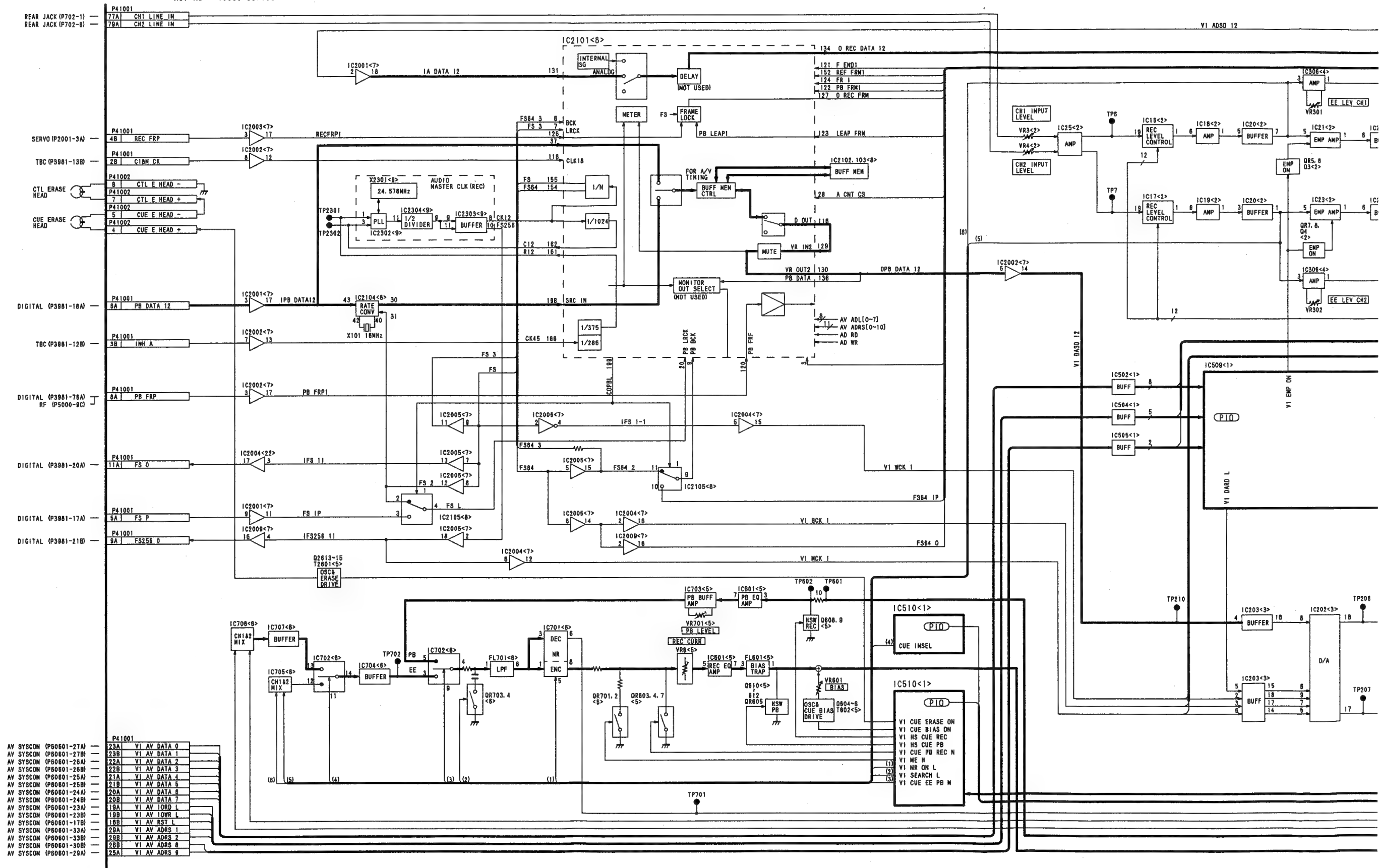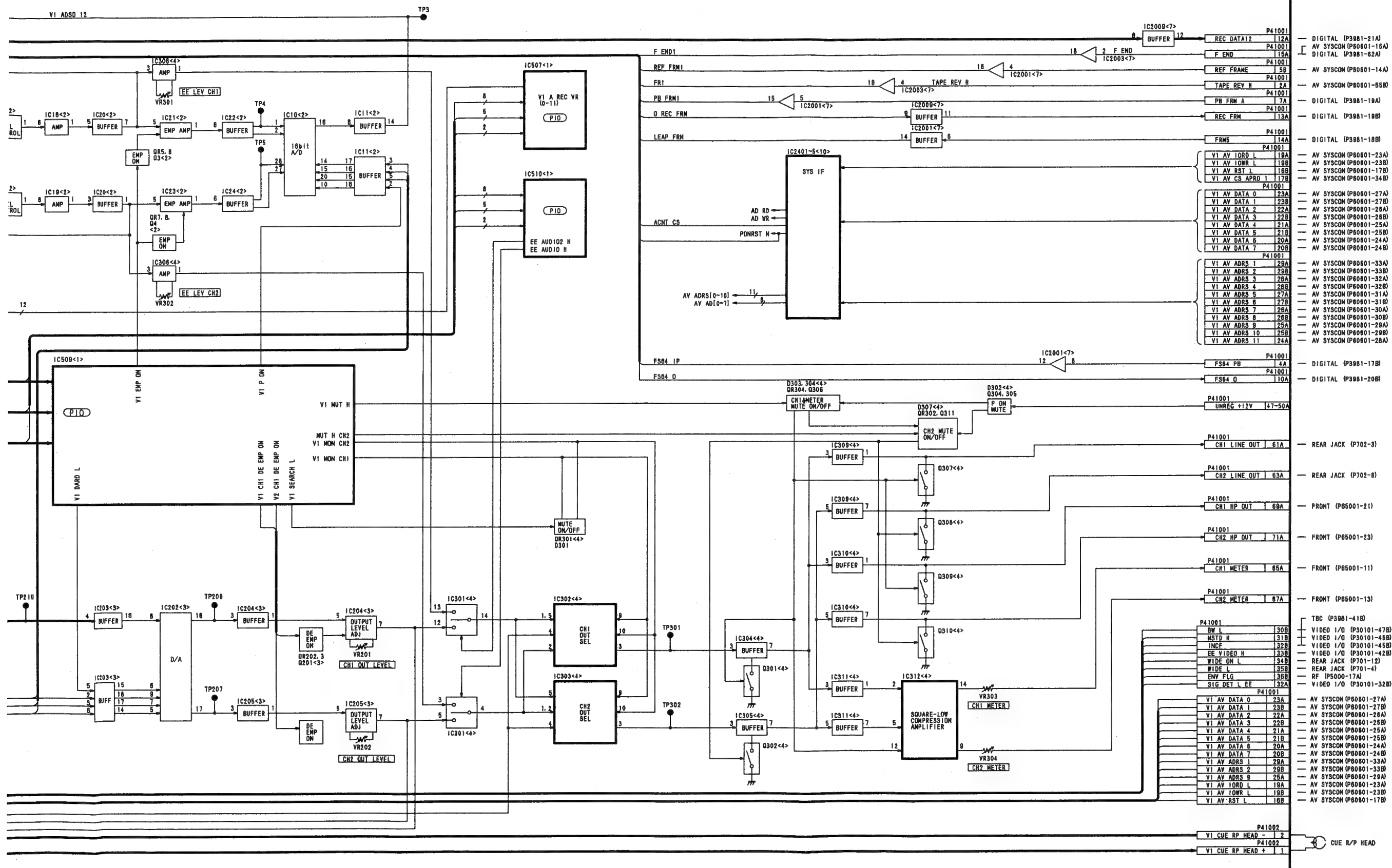
DIGITAL CORE BLOCK DIAGRAM

BLK—6

BLK—7
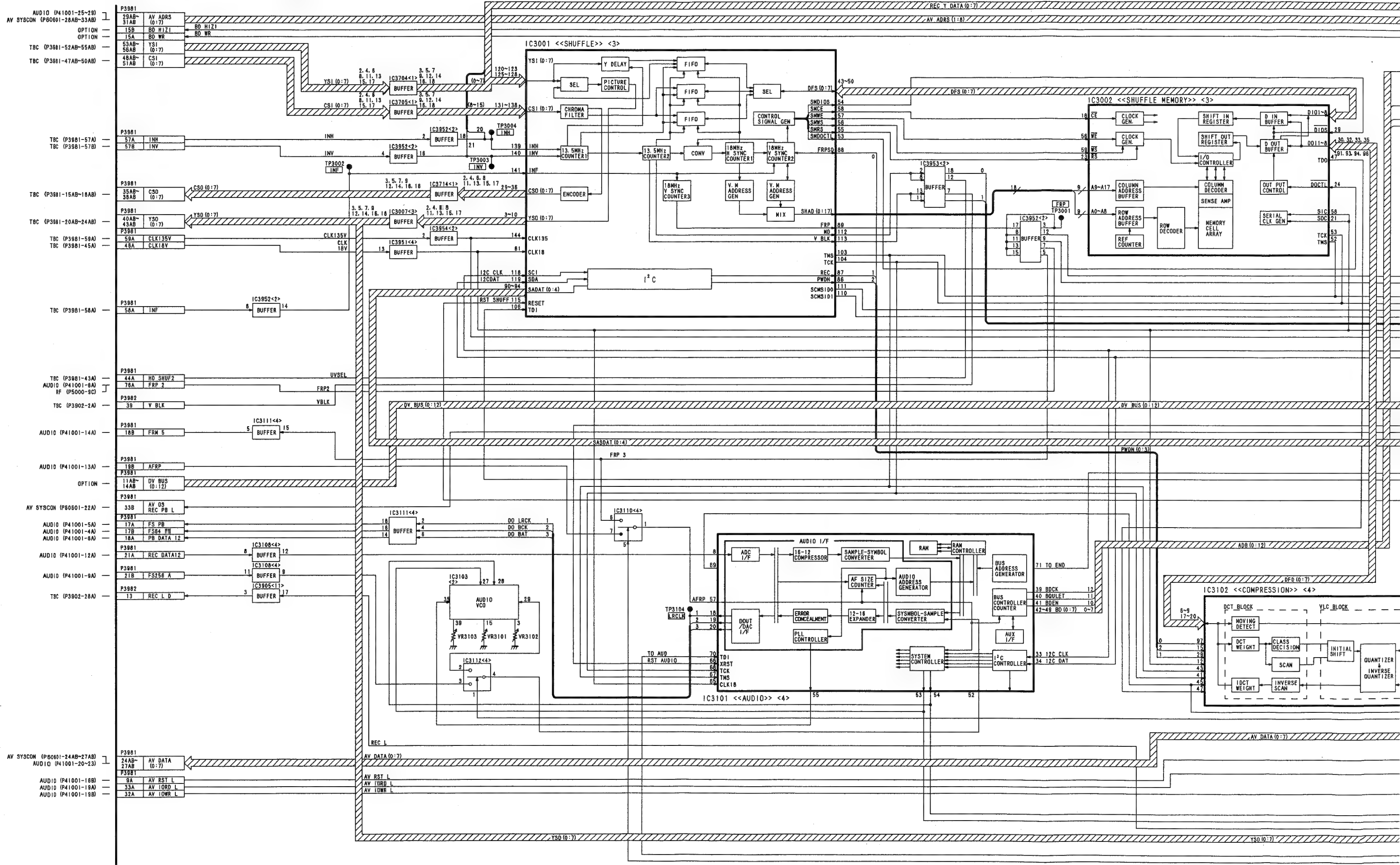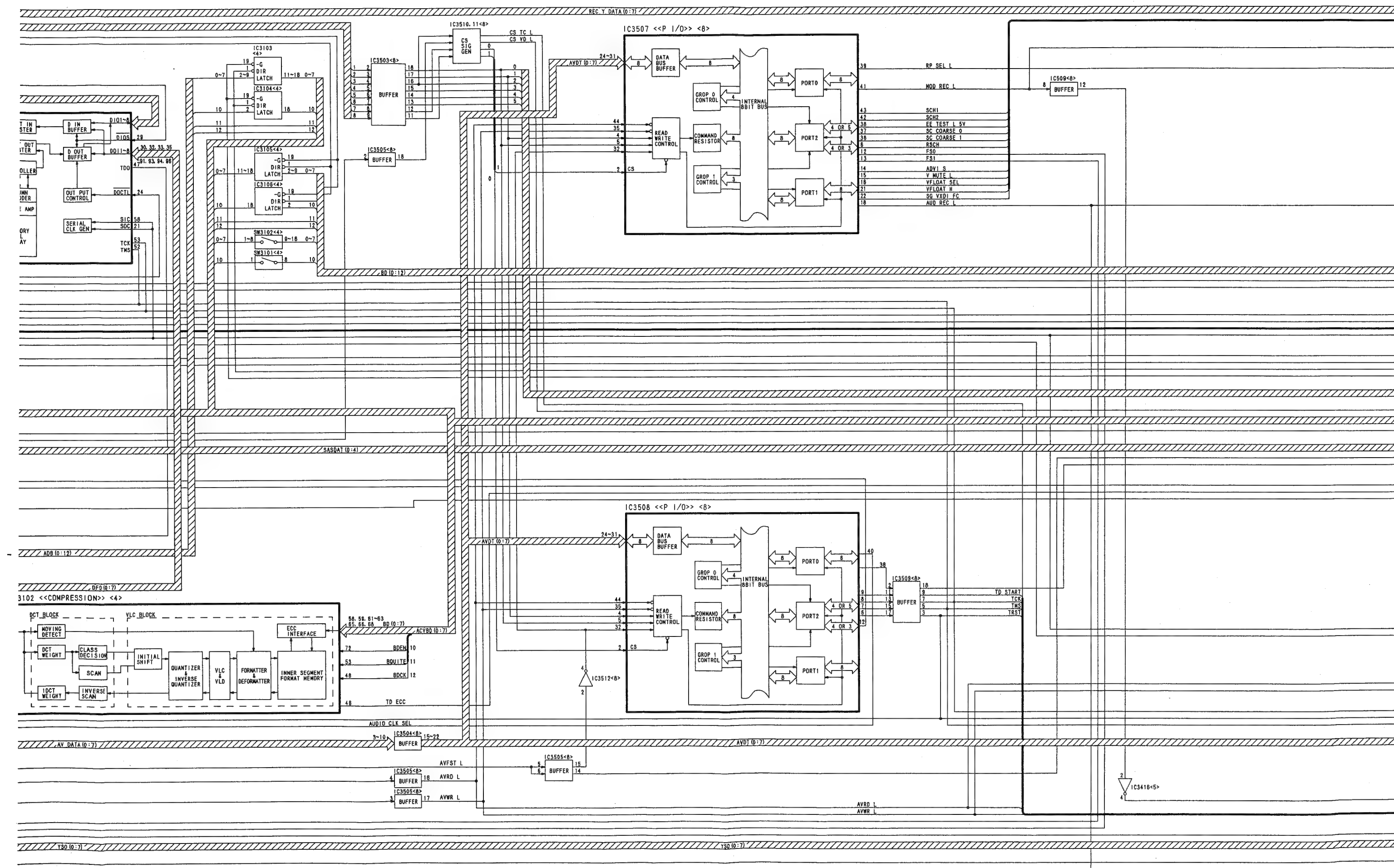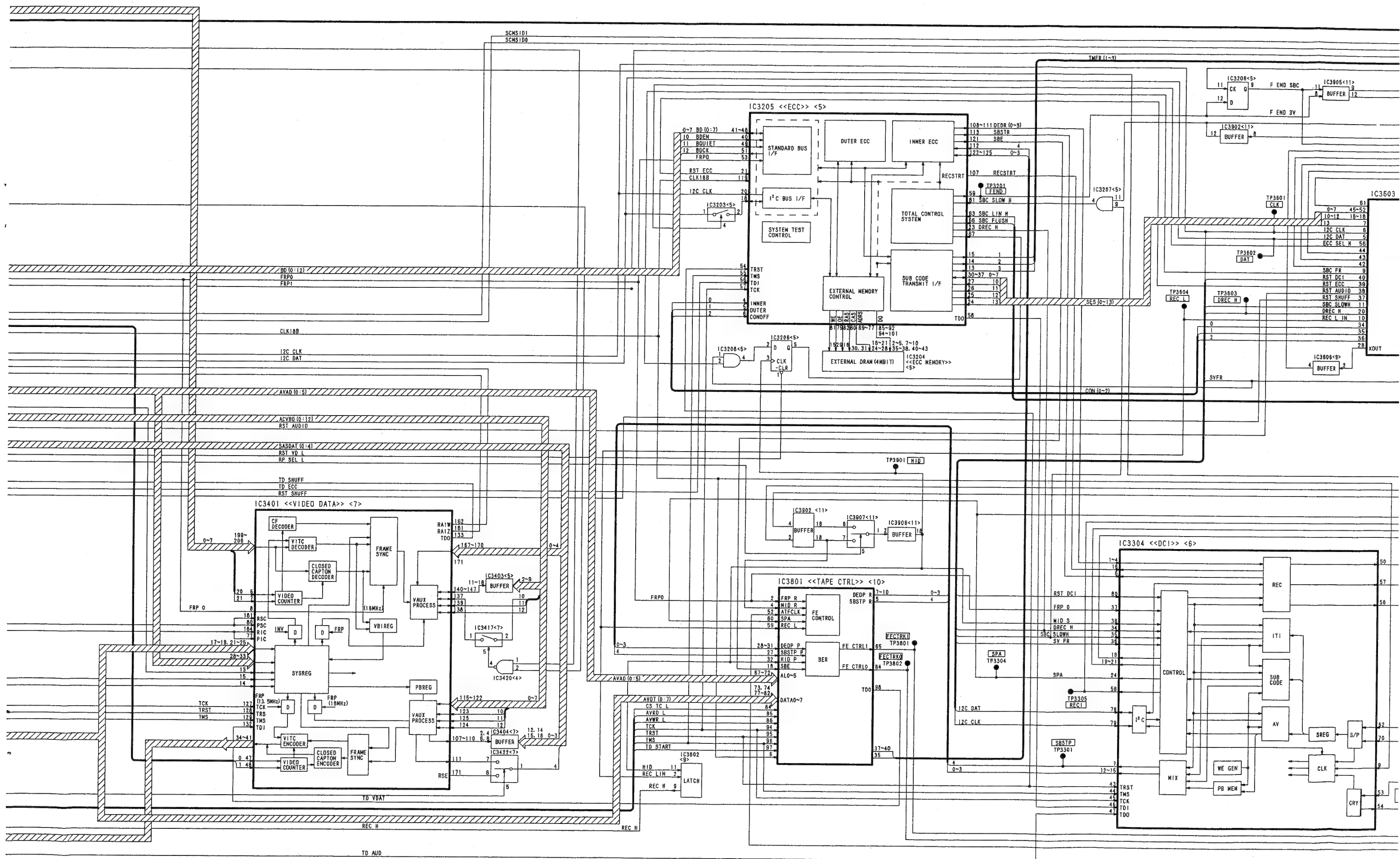
VIDEO I/O BLOCK DIAGRAM

Ref No. :30000 Sereis
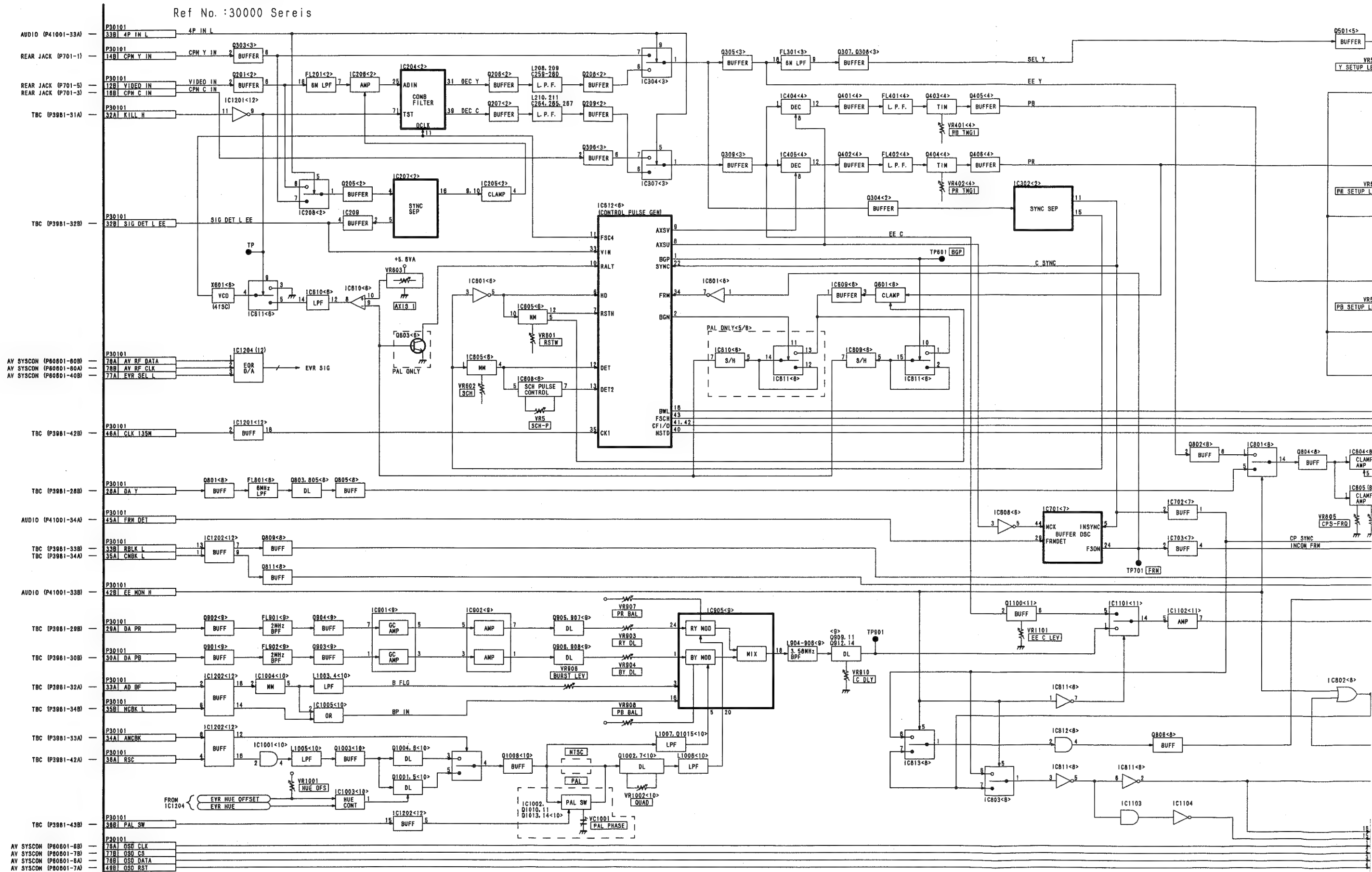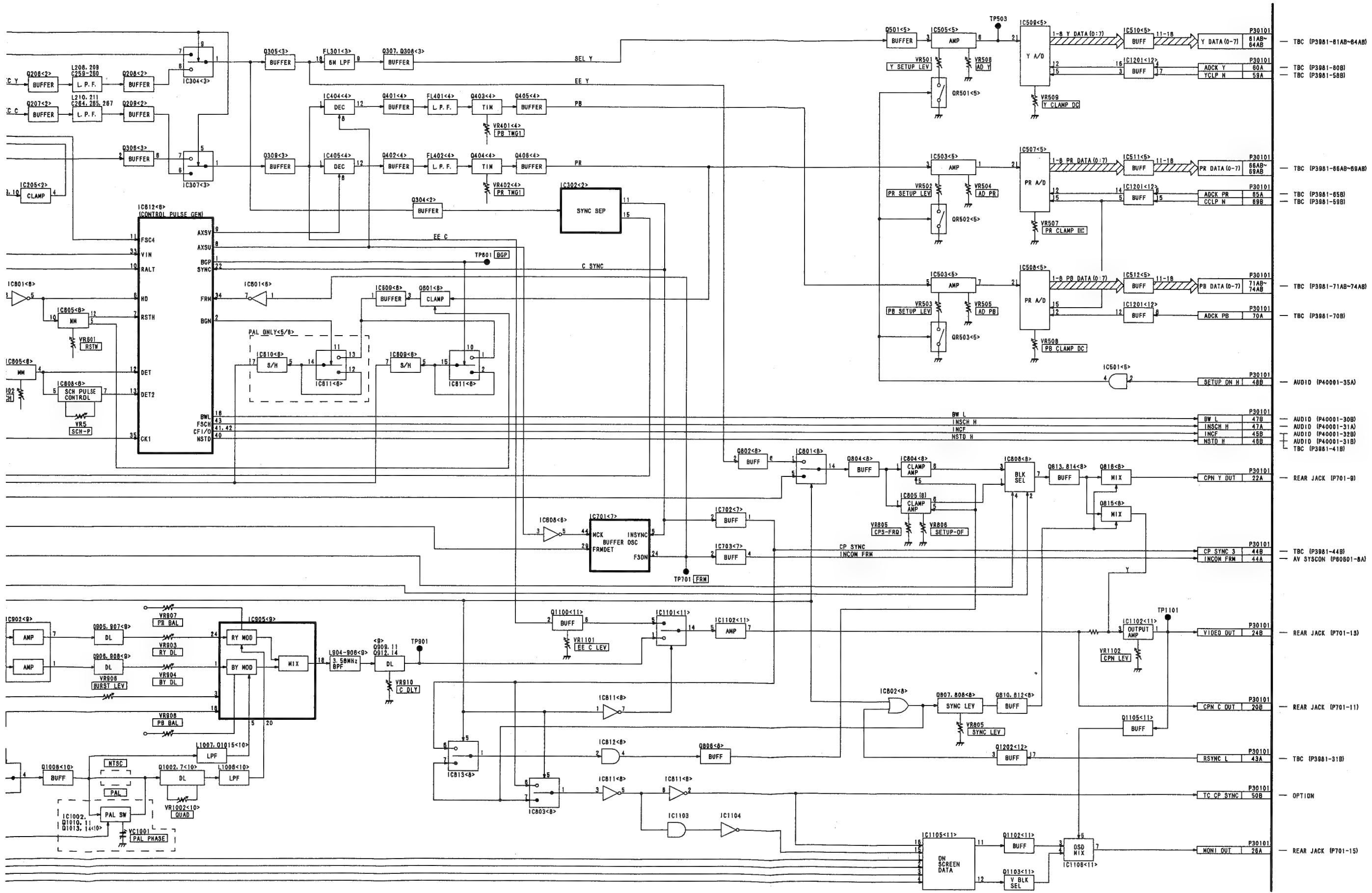
AV SYSCON BLOCK DIAGRAM

BLK—9

TBC BLOCK DIAGRAM

Ref No. 3000 SERIES
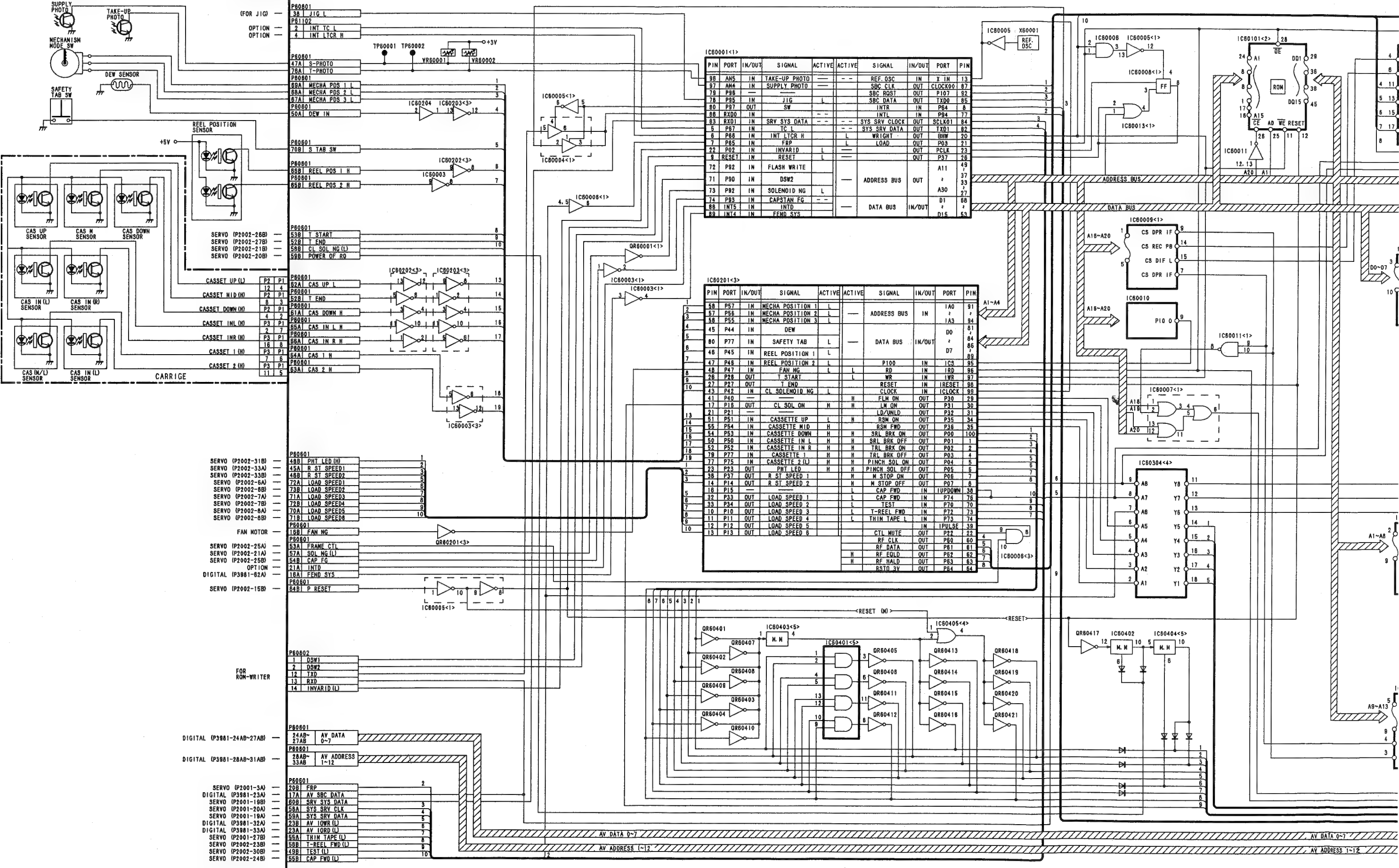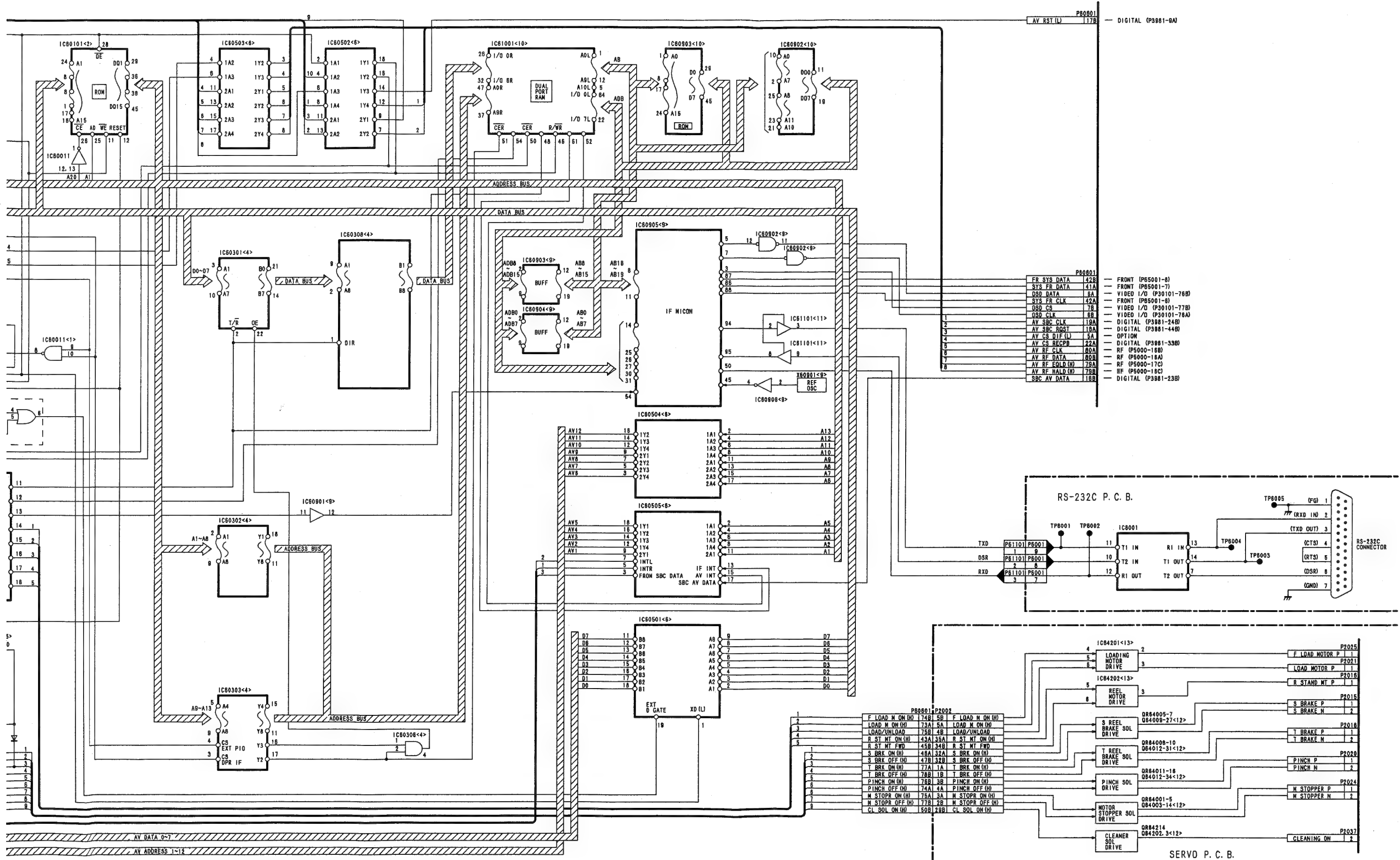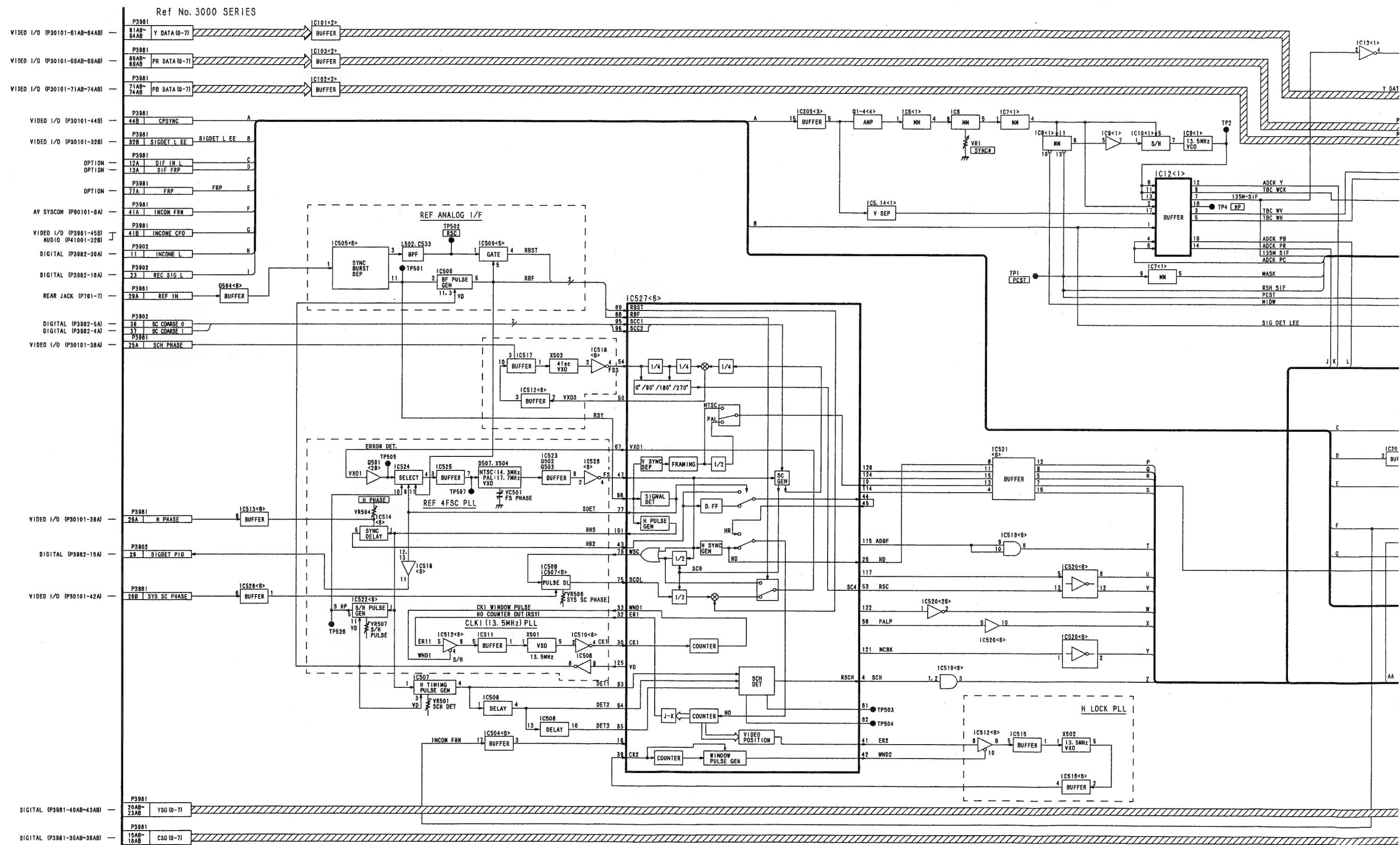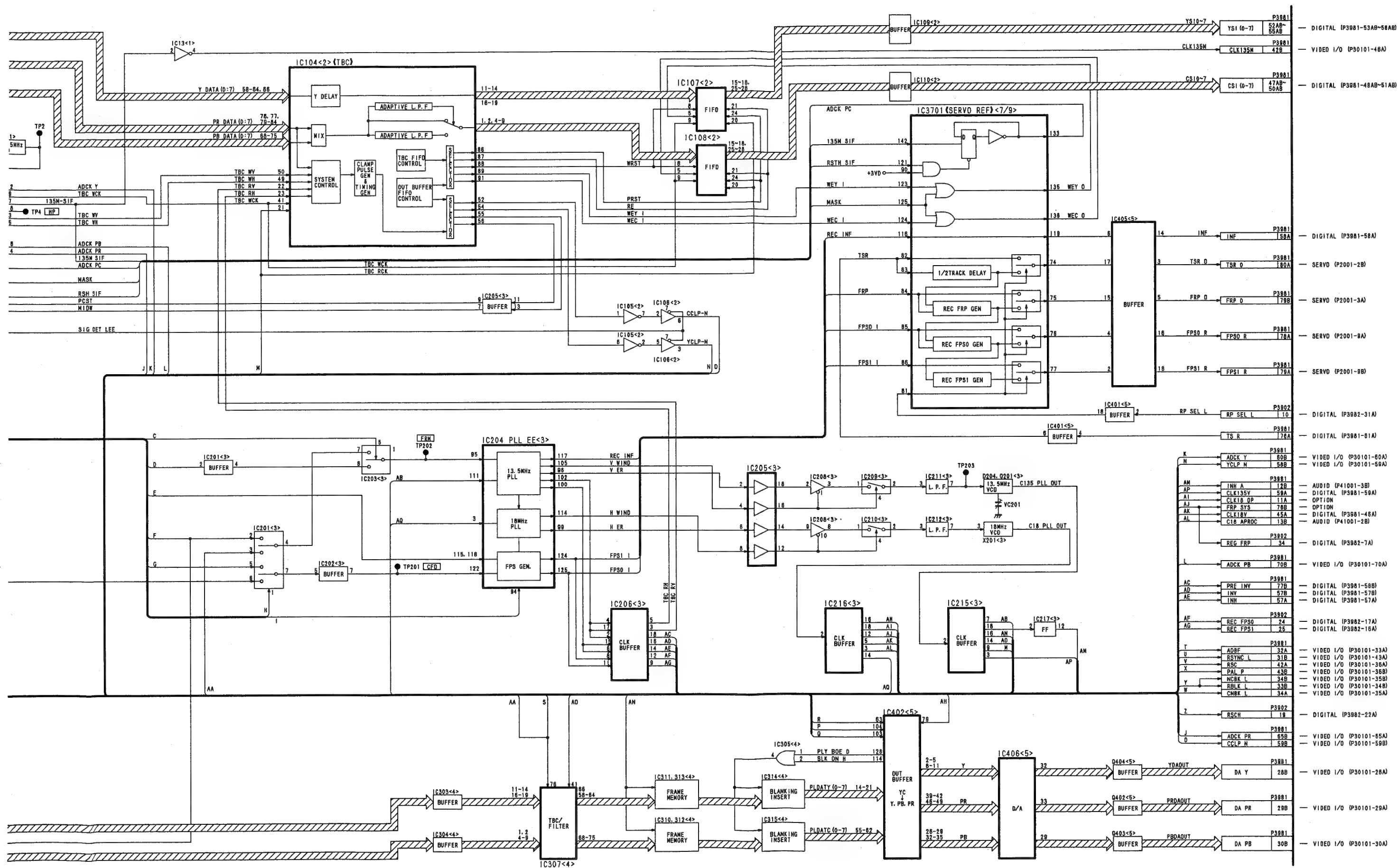
SECTION 6

SCHEMATIC DIAGRAMS

NOTE

(EX 1)

TITLE OF CIRCUIT

CIRCUIT NO.

NEXT CIRCUIT NO.

SYSCON (17) ────────────────► CHARA BL

VIDEO OUTPUT (1/19) SCHEMATIC DIAGRAM

NEME OF SIGNAL

THIS SIGNAL IS CONNECTED TO NEXT SCHEMATIC.   PLESE REFER TO
「SYSTEM CONTROL(1/19) SCHEMATIC DIAGRAM」

(EX 2)

TC7W04FUTL

TC7W04FUTL

C3022

15pF(NTSC MODEL ONLY)

2   4

1   5

C3022
*

C3037
*

REF	NTSC
C3022	15P/UV
C3037	*PAT/UV

* Mark:
Parts value, see table in the
Schematic diagram.

C3037
(No PART)

IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK △ HAVE THE SPECIAL CHARACTERISTICS
FOR SAFETY.   WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME
TYPE.

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART
NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS
DRAWING WASPREPARED.

⚠ CAUTION

THE ☐ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE
SECONDARY CIRCUIT.
PAY ATTENTION NOT RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

CONTENTS

SERVO (RELL SERVO MICON) 01/13

CIRCUIT BOARD NO. VEP02545J

MODEL NO.

SCM001

SERVO (MICON-C & ATF)   02/13

CIRCUIT BOARD NO.   VEP02545J

MODEL NO.

SCM002

Ref No. 2200 Series.

Ref.	D217, D230, D220	D217H, D230H
IC2201	M31774M5L432	VS12836
R2235	ERJ3GEYJ101V	PAT

SERVO (CAP & CYL FG AMP) 03/13

CIRCUIT BOARD NO. VEP02545J

MODEL NO.

COMPONENT NAME

SCM003

Ref No. 2300 Series.

SERVO (CAP/CYL DRIVE)

05/13

CIRCUIT BOARD NO.
VEP02545J

MODEL NO.

Ref No. 2500 Series.

SCM005

SERVO (REEL SERVO SW POWER) 06/13

CIRCUIT BOARD NO. VEP02545J

SCM006

SERVO (CTL AMP)

CIRCUIT BOARD NO. VEP02545J

Ref No. 2700 Series.

SCM007

S_REEL_FG1 (9)
S_REEL_FG2 (9)
T_REEL_FG1 (9)
T_REEL_FG2 (9)

8MHz_CLK (1)
NT_PAL (1)
CTL_CNT (7)
CAP_FWD_L (2)
FRM_RS (2)
3V (10)

R2802
100/J3

L2801
VLQ0319K101

R2805

(PLD)
PAT/J3

R2804
0/J3   (GA)

C2801
0.01/UBV

R2806
0/J3

C2802
0.01/UBV

IC2801
T160G11-1258

44 43 42 41 40 39 38 37 36 35 34
I/O I/O I/O VCC INPUT INPUT INPUT GND I/O
OE2N/INPUT
GCLRN/INPUT
OE1N/INPUT
GCLK/INPUT

1 I/O
2 I/O
3 I/O
4 GND
5 I/O
6 I/O
7 I/O
8 I/O
9 VCC
10 I/O
11 I/O

33 I/O
32 I/O
31 I/O
30 I/O
29 VCC
28 I/O
27 I/O
26 I/O
25 I/O
24 GND
23 I/O

12 13 14 15 16 17 18 19 20 21 22
I/O I/O I/O I/O GND VCC I/O I/O I/O I/O I/O

R2803
0/J3

RESET (1)

DGND

C2803
0.01/UBV

C2804
0.01/UBV

R2807
PAT/J3

R2808
0/J3

R2801
1000/J3

TP2801
EYF6CU

(10) FRAME_CTL

(1, 2) S_REEL_FG
(1, 10) S_REEL_FWD_L
(1, 10) T_REEL_FWD_L
(1, 2) T_REEL_FG

Ref No. 2800 Series.

COMPONENT NAME	SERVO (FRAME CTL)	08/13
CIRCUIT BOARD NO.	MODEL NO.	
VEP02545J		

SERVO (REEL SERVO FG AMP) 09/13

CIRCUIT BOARD NO.
VEP02545J

MODEL NO.

SCM009

MOTHER

P2001 VJP3949C070H

	A	NO	B	
TRP0 — CP2028	TRP0	1	TRP1	CP2049 — TRP1
TRP2 — CP2029	TRP2	2	TSR	CP2051 — TSR
FRP — CP2031	FRP	3	SPA	CP2052 — SPA
PFP0 — CP2032	PFP0	4	PFP1	PFP1
FLUSH — CP2033	FLUSH	5	FEND	CP2054 — FEND
CF0 — CP2034	CF0	6	CF1	CP2055 — CF1
CF2 — CP2035	CF2	7	SV_LOCK_H	CP2056 — SV_LOCK_H
PCF1 — CP2036	PCF1	8	PCF2	CP2057 — PCF2
FPS0	FPS0	9	FPS1	CP2058 — FPS1
J0G0 — CP2037	J0G0	10	JOG1	JOG1
		11		
ATF_ERR — CP2038	ATF_ERR	12	LIVE_CTL	CP2059 — LIVE_CTL
RTV_SPD_PB — CP2039	RTV_SPD_PB	13	REC_HEAD_L	REC_HEAD_L
	AGND	14	AGND	
	AGND	15	REFCLK	CP2060 — REFCLK
	AGND	16	AGND	
ATF1 — CP2040	ATF1	17	AGND	
PB_ENV — CP2041	PB_ENV	18	RP_ENV	CP2061 — RP_ENV
RP_HSW — CP2043	RP_HSW	19	FE_HSW	CP2062 — FE_HSW
PB_HSW	PB_HSW	20		
		21	CYL_FG	CP2063 — CYL_FG+
SLOW_H — CP2044	SLOW_H	22	LIN_H	CP2064 — LIN_H
CAP_FWD_L — CP2045	CAP_FWD_L	23	S_ERR	CP2009 — S_ERR
TENSION_TP	TENSION_TP	24	TENSION_VR	TENSION_VR
EVR_TEN — CP2046	EVR_TEN	25	CASSET_POS_1	CP2065 — CASSET_POS_1
EVR_SRL — CP2047	EVR_SRL	26	CASSET_POS_2	CP2066 — CASSET_POS_2
EVR_TRL — CP2048	EVR_TRL	27	CASSET_POS_3	CP2067 — CASSET_POS_3
	−5R6V	28	T_ERR	CP2068 — T_ERR
	−5R6V	29	T_M_GND	T_M_GND
+5V — CP2131	+5V	30	9V	
	+5V	31	9V	
	A5.6V	32	+3V	
	A5.6V	33	+3V	
	AGND	34	DGND	
	AGND	35	DGND	

D2001 MA704-TX
D2002 MA704-TX

−5.5V L2001 VLQ0319K101

C2001 16V10/EVV

5.6V

L2003 VLQ0319K100

C2003 16V10/EVV

FL2001 VLF0941C223T

CP2069 3V

CP2070

AGND

DGND

AV/SYSCON

P2002 VJP3949C070H

	A	NO	B	
T_BRK_ON(H) — CP2071	T_BRK_ON(H)	1	T_BRK_OFF(H)	CP2104 — T_BRK_OFF(H)
T_PHOTO — CP2072	T_PHOTO	2	M_STOPPER_ON_H	CP2105 — M_STOPPER_ON_H
M_STOPPER_OFF_H — CP2073	M_STOPPER_OFF_H	3	PINCH_ON(H)	CP2106 — PINCH_ON(H)
PINCH_OFF(H) — CP2074	PINCH_OFF(H)	4	LOAD/UNLOAD	CP2107 — LOAD/UNLOAD
LOAD_M_ON_H — CP2075	LOAD_M_ON_H	5	F_LOAD_M_ON_H	CP2108 — F_LOAD_M_ON_H
LOAD_SPEED1 — CP2076	LOAD_SPEED1	6	LOAD_SPEED2	CP2109 — LOAD_SPEED2
LOAD_SPEED3 — CP2077	LOAD_SPEED3	7	LOAD_SPEED4	CP2110 — LOAD_SPEED4
LOAD_SPEED5 — CP2078	LOAD_SPEED5	8	LOAD_SPEED6	CP2111 — LOAD_SPEED6
MECHA_POS1_L — CP2079	MECHA_POS1_L	9	SAFETY_TAB	CP2112 — SAFETY_TAB
MECHA_POS2_L — CP2080	MECHA_POS2_L	10	R_C_CLK	CP2132 — R_C_CLK
MECHA_POS3_L — CP2081	MECHA_POS3_L	11	R_TXD	CP2133 — R_TXD
CASSET_INR_H — CP2082	CASSET_INR_H	12	C_TXD	CP2134 — C_TXD
CASSET_INL_H — CP2083	CASSET_INL_H	13	REEL_POS1_H	CP2113 — REEL_POS1_H
CASSET1_H — CP2084	CASSET1_H	14	REEL_POS2_H	CP2114 — REEL_POS2_H
CASSET2_H — CP2085	CASSET2_H	15	RESET	CP2135 — RESET
CASSET_UP_L — CP2086	CASSET_UP_L	16	CASSET_MID_H	CP2115 — CASSET_MID_H
CASSET_DOWN_H — CP2087	CASSET_DOWN_H	17	CAS_DOWN_L	CP2116 — CAS_DOWN_L
	DGND	18	AGND	
SYS_SRV_DATA — CP2088	SYS_SRV_DATA	19	SRV_SYS_DATA	CP2117 — SRV_SYS_DATA
SYS_SRV_CLK — CP2089	SYS_SRV_CLK	20	POWER_OF_RQ	CP2013 — POWER_OF_RQ
SOL_NG(L) — CP2090	SOL_NG(L)	21	CLN_SOL_NG	CP2015 — CLN_SOL_NG
	5V(jigu)	22	5V(jigu)	
S_REEL_FWD_L — CP2092	S_REEL_FWD_L	23	T_REEL_FWD_L	CP2121 — T_REEL_FWD_L
FEND — CP2093	FEND	24	CAP_FWD_L	CP2122 — CAP_FWD_L
FRAME_CTL — CP2094	FRAME_CTL	25	CAP_FG1	CP2123 — CAP_FG1
TSR — CP2095	TSR	26	T_START	CP2124 — T_START
FRP — CP2096	FRP	27	T_END	CP2125 — T_END
DEW_ON_H — CP2097	DEW_ON_H	28	DEW_GND	CP2126 — DEW_GND
LOAD_FG_M — CP2098	LOAD_FG_M	29	CL_SOL_ON(H)	CP2127 — CL_SOL_ON(H)
FPS0 — CP2099	FPS0	30	TEST(L)	
S_PHOTO — CP2100	S_PHOTO	31	PHT_LED(H)	CP2127 — PHT_LED(H)
S_BRK_ON(H) — CP2101	S_BRK_ON(H)	32	S_BRK_OFF(H)	CP2128 — S_BRK_OFF(H)
R_ST_SPEED1 — CP2102	R_ST_SPEED1	33	R_ST_SPEED2	CP2129 — R_ST_SPEED2
R_ST_SPEED3 — CP2103	R_ST_SPEED3	34	R_STAND_MT_FWD	CP2130 — R_STAND_MT_FWD
R_STAND_MT_ON_H	R_STAND_MT_ON_H	35	SOL_12V	SOL_12V

D3VAD

COMPONENT NAME	SERVO (CONNECT)	10/13
CIRCUIT BOARD NO.		MODEL NO.
VEP02545J		

SCM010

REEL STAND POS
P2012
VJP3172D005
1	+5V
2	REEL POS1 H
3	REEL POS2 H
4	
5	DGND

+5V
REEL_POS1_H
REEL_POS2_H

MODE SW
P2022
VJP3172D004
1	MECHA POS1 L
2	MECHA POS2 L
3	MECHA POS3 L
4	DGND

MECHA_POS1_L
MECHA_POS2_L
MECHA_POS3_L

T SENSOR
P2019
VJP3172D002
| 1 | T_PHOTO |
| 2 | DGND |

T_PHOTO

LOADING MOTOR FG
P2023
PAT/VJP3172D004
1	L_FG_VCC
2	LOAD_FG_M
3	
4	DGND

LOAD_FG_M

DGND

PINCH SOL
P2020
VJP3518D003
1	PINCH P
2	
3	PINCH N

PINCH_P
PINCH_N

LOADING MOTOR
P2021
VJP3518D002
| 1 | LOAD MOTOR P |
| 2 | LOAD MOTOR N |

LOAD_MOTOR_P
LOAD_MOTOR_N

CTL
P2030
VJP3172D003
1	CTL HEAD P
2	
3	CTL HEAD G

CTL_HEAD_P
CTL_HEAD_G

CARRIGE
P2026
VJP1236T
1	+5V
2	CASSET INR H
3	CASSET INL H
4	CASSET1 H
5	CASSET2 H
6	CASSET UP L
7	CASSET MID H
8	CASSET DOWN H
9	DGND

CASSET_INR_H
CASSET_INL_H
CASSET1_H
CASSET2_H
CASSET_UP_L
CASSET_MID_H
CASSET_DOWN_H

MIC UNIT
P2017
VJS3801D010
1	
2	
3	SAFETY TAB
4	DGND
5	DGND
6	CASSET POS 3	(MIC4)
7	CASSET POS 2	(MIC3)
8	CASSET POS 1	(MIC2)
9		(MIC1)
10	

SAFETY_TAB
CASSET_POS_3
CASSET_POS_2
CASSET_POS_1

DEW
P2011
VJP3172D002
| 1 | DEW ON H |
| 2 | DEW GND |

DEW_ON_H
DEW_GND

M STOPPER SOL
P2024
VJP3518D002
| 1 | M STOPPER N |
| 2 | M STOPPER P |

M_STOPPER_N
M_STOPPER_P

TOHDAI
P2014
VJP3172D003
1	TAPE SENSOR ON
2	
3	TAPE SENSOR GND

TAPE_SENSOR_ON
TAPE_SENSOR_GND

T BRK SOL
P2018
VJP3518D002
| 1 | T BRAKE P |
| 2 | T BRAKE N |

T_BRAKE_P
T_BRAKE_N

FRONT MOTOR
P2025
VJP1230T
1	F LOAD MOTOR P
2	
3	F LOAD MOTOR N

F_LOAD_MOTOR_P
F_LOAD_MOTOR_N

REEL STAND MOTOR
P2016
VJP3518D003
1	R STAND MT P
2	
3	R STAND MT N

R_STAND_MT_P
R_STAND_MT_N

CAS DOWN SW
P2038
VJP3172D002
| 1 | CAS DOWN L |
| 2 | DGND |

CAS_DOWN_L

S SENSOR
P2013
VJP3172D002
| 1 | S PHOTO |
| 2 | DGND |

S_PHOTO

S BRK SOL
P2015
VJP3518D002
| 1 | S BRAKE P |
| 2 | S BRAKE N |

S_BRAKE_P
S_BRAKE_N

TENSION
P2032
VJP3172D004
1	TEN VCC
2	TEN+
3	TEN 2R5V
4	TEN-

TEN_VCC
TEN+
TEN_2R5V
TEN-

T REEL
P2035
VJS3813C017
1	FG VCC
2	T FG1
3	AGND
4	T FG2
5	T VH-
6	T H3-
7	T VH+
8	T H3+
9	T M1
10	T H2-
11	T VH+
12	T H2+
13	T M3
14	T H1-
15	T VH+
16	T H1+
17	T M2

FG_VCC
T_FG1
T_FG2
T_VH-
T_H3-
T_VH+
T_H3+
T_M1
T_H2-
T_VH+
T_H2+
T_M3
T_H1-
T_VH+
T_H1+
T_M2

AGND

S REEL
P2034
VJS3813C017
1	S FG1
2	FG VCC
3	AGND
4	S FG2
5	S VH-
6	S H3-
7	S VH+
8	S H3+
9	S M1
10	S H2-
11	S VH+
12	S H2+
13	S M3
14	S H1-
15	S VH+
16	S H1+
17	S M2

FG_VCC
S_FG1
S_FG2
S_VH-
S_H3-
S_VH+
S_H3+
S_M1
S_H2-
S_VH+
S_H2+
S_M3
S_H1-
S_VH+
S_H1+
S_M2

P2003
VJP1231T
1	UNREG
2	UNREG
3	UNREG GND
4	UNREG GND

UNREG
CYL_GND
CAP_GND
RL_GND (UNREG_GND)

UNREG_GND
MGND

CAPSTAN
P2036
VJS3406D019
1	CAP FG2 M
2	AGND
3	CAP FG1 M
4	CVMR
5	CAM3
6	CAM2
7	CAH V+
8	CAH2+
9	CAH V-
10	CAH2-
11	CAH1-
12	CAH V+
13	CAH1+
14	CAH V-
15	CAH V-
16	CAH3-
17	CAH V+
18	CAH3+
19	CAM1

CAP_FG2_M
CAPFG_GND
CAP_FG1_M
CVMR
CAM3
CAM2
CAH_V+
CAH_V-
CAH1+
CAH3+
CAM1

CYL
P2033
VJS3406D015
1	CYLH3-
2	CYLH3+
3	CYLH2-
4	CYLH2+
5	CYLH1-
6	CYLH1+
7	CYLH V-
8	CYLH V+
9	CYL FG+
10	CYL PF GND	(CYL_FG-)
11	CYL PG+
12	CYL PF GND	(CYL_FG-)
13	CYL M1
14	CYL M2
15	CYL M3

CYLH3-
CYLH3+
CYLH2-
CYLH2+
CYLH1-
CYLH1+
CYLH_V-
CYLH_V+
CYL_FG+
CYL_PF_GND
CYL_PG+
CYL_M1
CYL_M2
CYL_M3

J1 D217H, D230H ONLY (2) CYL_FG+_H

BACK_UP_C
P2004
VJP1230T
1	SOL 12V
2	
3	MGND

SOL_12V

CLEANING SOL
P2037
VJP3125D002
| 1 | MGND |
| 2 | CLEANING ON |

CLEANING_ON

COMPONENT NAME	SERVO (MECHA I/F)	11/13
CIRCUIT BOARD NO.		MODEL NO.
VEP02545J		

SCM011

SERVO (BREAK & PINCH) 12/13

CIRCUIT BOARD NO. VEP02545J

SCM012

Ref No. 64200 Series.

COMPONENT NAME	SERVO (LOADING)	13/13
CIRCUIT BOARD NO.		MODEL NO.
VEP02545J		

SCM013
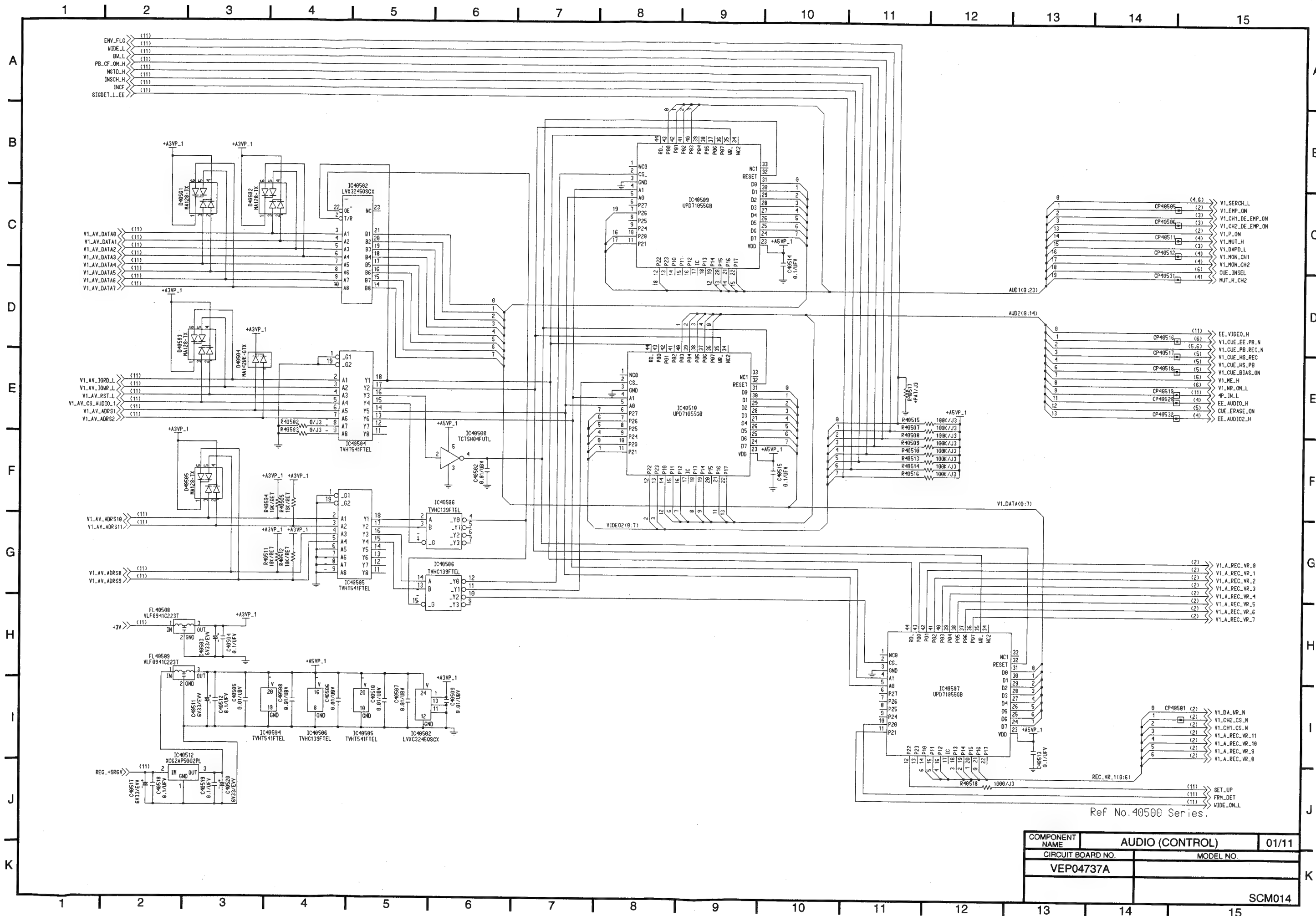
Ref No. 40500 Series.

COMPONENT NAME: AUDIO (INPUT AD) 02/11

CIRCUIT BOARD NO.: VEP04737A MODEL NO.

SCM015

Ref No.40000 Series.

AUDIO (DA)

COMPONENT NAME: AUDIO (DA) 03/11

CIRCUIT BOARD NO.: VEP04737A

MODEL NO.

SCM016

Ref No.40200 Series.

*PAT=PATTERN ONLY
*=REFER TO THE COMPARISON CHART

AUDIO(OUTPUT)

COMPONENT NAME	AUDIO(OUTPUT)	04/11
CIRCUIT BOARD NO.		MODEL NO.
VEP04737A		
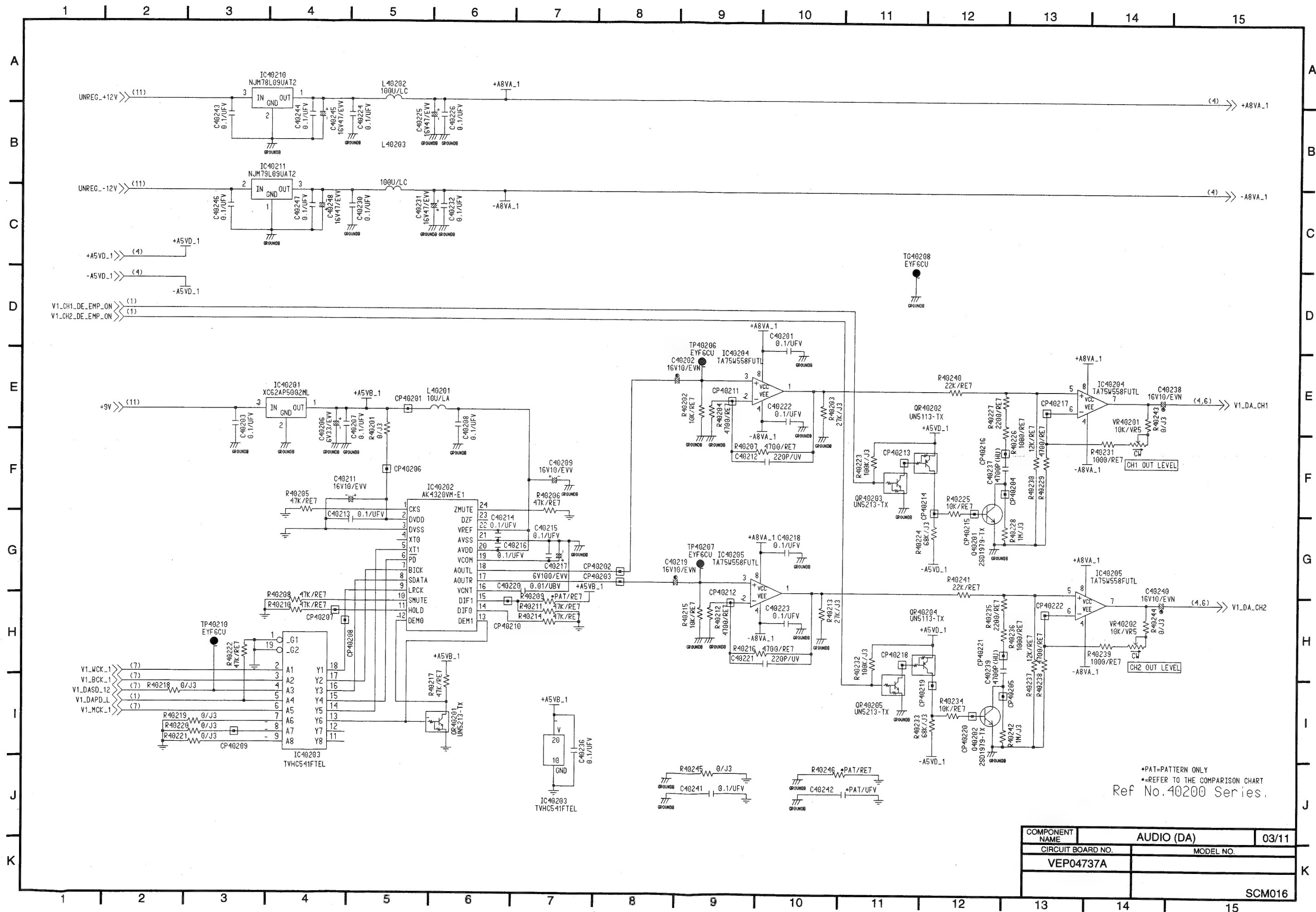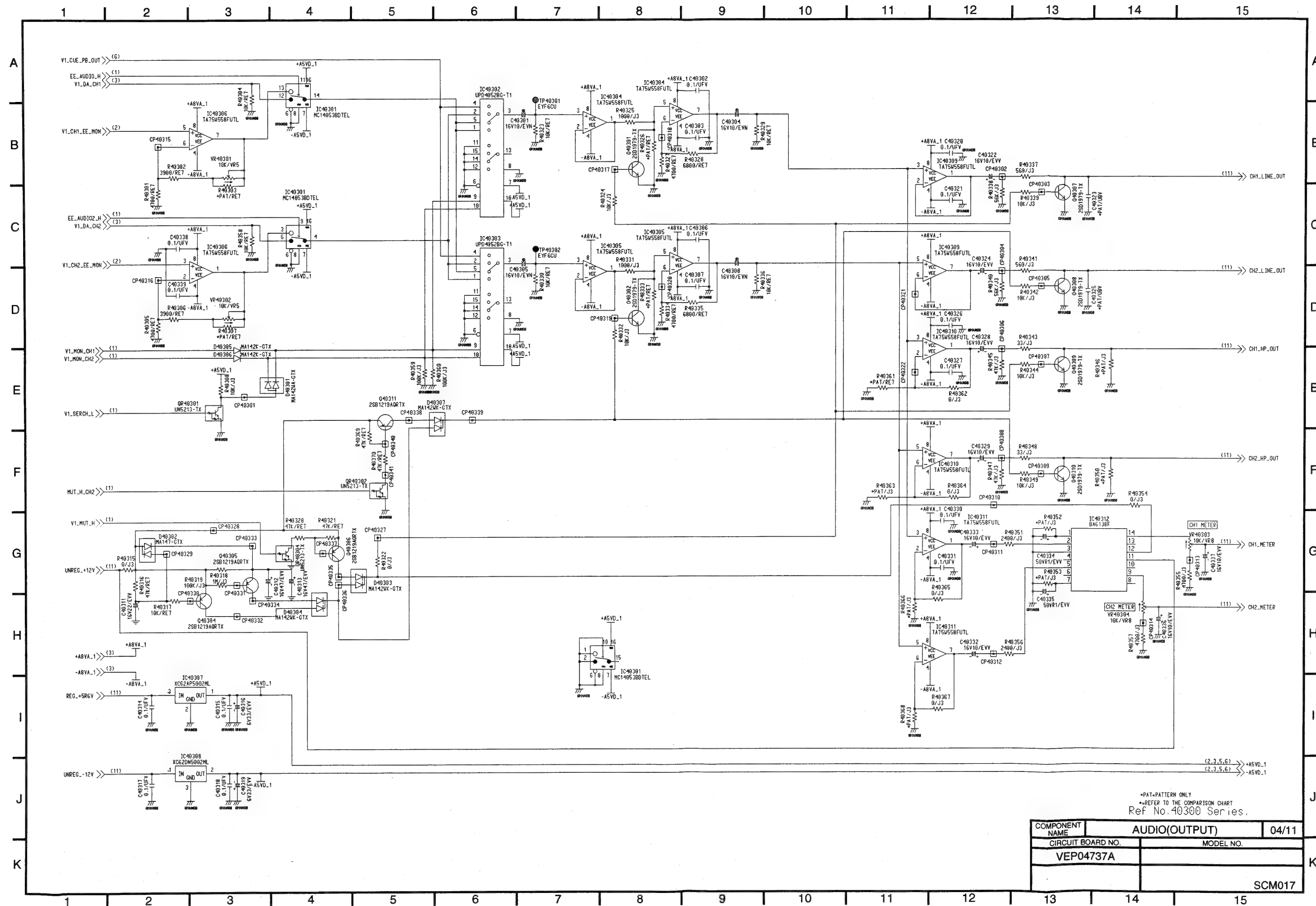
+PAT=PATTERN ONLY
*=REFER TO THE COMPARISON CHART
Ref No.40300 Series.

SCM017

COMPONENT NAME: AUDIO (CUE 1) 05/11
CIRCUIT BOARD NO.: VEP04737A
MODEL NO.:

SCM018

Ref No.40600 Series.

AUDIO (CUE 2)

06/11

CIRCUIT BOARD NO.
VEP04737A

MODEL NO.

SCM019

Ref No. 40700 Series.

*PAT=PATTERN ONLY

AUDIO (DVC CNT)

08/11

CIRCUIT BOARD NO.

VEP04737A

COMPONENT NAME

MODEL NO.

SCM021

A_PROC_NEW

IC42101
T16GH7AF1216

*PAT=PATTERN ONLY

Ref No.42100 Series.

Ref No.42400 Series.

COMPONENT NAME	AUDIO (DVC SYS)	10/11
CIRCUIT BOARD NO.		MODEL NO.
VEP04737A		

SCM023

P41001
VJP3657

B	NO	A
GND	1	GND
C18M_CK	2	TAPE_REV_H
INH_A	3	GND
REC_FRP	4	FS64_PB
REF_FRAME	5	FS_P
GND	6	PB_DATA12
GND	7	PB_FRM_A
GND	8	PB_FRP
GND	9	FS256_O
GND	10	FS64_O
GND	11	FS_O
GND	12	REC_DATA12
GND	13	REC_FRM
GND	14	FRM5
GND	15	FEND
AV_RST_L	16	GND
AV_CS_APROC_1	17	GND
AV_CS_AUDIO_L	18	GND
AV_IOWR_L	19	AV_IORD_L
AV_DATA7	20	AV_DATA6
AV_DATA5	21	AV_DATA4
AV_DATA3	22	AV_DATA2
AV_DATA1	23	AV_DATA0
GND	24	AV_ADR11
AV_ADR10	25	AV_ADR9
AV_ADR8	26	AV_ADR7
AV_ADR6	27	AV_ADR5
AV_ADR4	28	AV_ADR3
AV_ADR2	29	AV_ADR1
BW_L	30	PB_CF_ON_H
NSTD_H	31	INSCH_H
INCF	32	SIGDET_L_EE
EE_VIDEO_H	33	4P_IN_L
WIDE_ON_L	34	FRM_DET
WIDE_L	35	SET_UP
ENV_FLG	36	GND
GND	37	GND
GND	38	GND
GND	39	GND
GND	40	GND
GND	41	GND
GND	42	GND
GND	43	REG_+5R6V
GND	44	REG_+5R6V
GND	45	REG_+5R6V
GND	46	REG_+5R6V
GND	47	UNREG_+12V
GND	48	UNREG_+12V
GND	49	UNREG_+12V
GND	50	UNREG_+12V
GND	51	GND
GND	52	UNREG_-12V
GND	53	UNREG_-12V
GND	54	UNREG_-12V
GND	55	UNREG_-12V
GND	56	GND
GND	57	GND
GND	58	GND
GND	59	GND
GND	60	GND
GND	61	CH1_LINE_OUT
GND	62	GND
GND	63	CH2_LINE_OUT
GND	64	GND
GND	65	CH1_METER
GND	66	GND
GND	67	CH2_METER
GND	68	GND
GND	69	CH1_HP_OUT
GND	70	GND
GND	71	CH2_HP_OUT
GND	72	GND
GND	73	GND
GND	74	GND
GND	75	GND
GND	76	GND
GND	77	CH1_LINE_IN
GND	78	GND
GND	79	CH2_LINE_IN
GND	80	GND

Left side signals:
C18M_CK (7)
INH_A (7)
REC_FRP (7)
REF_FRAME (7)

V1_AV_RST_L (1,10)
V1_AV_CS_APROC_1 (10)
V1_AV_CS_AUDIO_1 (1)
V1_AV_IOWR_L (1,10)
V1_AV_DATA7 (1,10)
V1_AV_DATA5 (1,10)
V1_AV_DATA3 (1,10)
V1_AV_DATA1 (1,10)

V1_AV_ADRS10 (1,10)
V1_AV_ADRS8 (1,10)
V1_AV_ADRS6 (1,10)
V1_AV_ADRS4 (1,10)
V1_AV_ADRS2 (1,10)
BW_L (1)
NSTD_H (1)
INCF (1)
EE_VIDEO_H (1)
WIDE_ON_L (1)
WIDE_L (1)
ENV_FLG (1)

Right side signals:
TAPE_REV_H (7)
FS64_PB (7)
FS_P (7)
PB_DATA12 (7)
PB_FRM_A (7)
PB_FRP (7)
FS256_O (7)
FS64_O (7)
FS_O (7)
REC_DATA12 (7)
REC_FRM (7)
FRM5 (7)
FEND (7)

V1_AV_IORD_L (1,10)
V1_AV_DATA6 (1,10)
V1_AV_DATA4 (1,10)
V1_AV_DATA2 (1,10)
V1_AV_DATA0 (1,10)
V1_AV_ADRS11 (1,10)
V1_AV_ADRS9 (1,10)
V1_AV_ADRS7 (1,10)
V1_AV_ADRS5 (1,10)
V1_AV_ADRS3 (1,10)
V1_AV_ADRS1 (1,10)
PB_CF_ON_H (1)
INSCH_H (1)
SIGDET_L_EE (1)
4P_IN_L (1)
FRM_DET (1)
SET_UP (1)

IC41001
XC62AP3002PL
IN GND OUT
C41001 0.1/16V
C41002 3.1/6V
C41003 GY33/EVV
CP41001
+3V (1,10)

REG_+5R6V (1,4,7,9)

UNREG_+12V (3,4,5)

UNREG_-12V (2,3,4)

IC41002
NJM78L09UAT2
IN GND OUT
C41004 0.1/16V
C41005 3.1/6V
C41006 1GV47/EVV
CP41002
+9V (3,5,6)

CH1_LINE_OUT (4)
CH2_LINE_OUT (4)
CH1_METER (4)
CH2_METER (4)
CH1_HP_OUT (4)
CH2_HP_OUT (4)
CH1_LINE_IN (2)
CH2_LINE_IN (2)
V1_CUE_R_P_HEAD_- (5)

P41002
VJP3125D009

1	CUE_R/P_HEAD+
2	CUE_R/P_HEAD-
3	CUE_R/P_HEAD_GND
4	CUE_E_HEAD+
5	CUE_E_HEAD-
6	CUE_E_HEAD_GND
7	CTL_E_HEAD+
8	CTL_E_HEAD-
9	CTL_E_HEAD_GND

V1_CUE_R_P_HEAD_+ (5)
V1_ERASE_HEAD (5)

BIAS_GND

*PAT=PATTERN ONLY
Ref No.41000 Series.

COMPONENT NAME	AUDIO (CONNECT)	11/11
CIRCUIT BOARD NO.	MODEL NO.	
VEP04737A		

AV SYSCON

01/11

Ref No. 60000 Series

CIRCUIT BOARD NO. VEP06D02A

SCM025

A [1-20] (1)

A [1-20]

Flash ROM

A [17]

IC60101
MBLV80BA12PT

RAM

IC60102
KM68V1CLTE7L

A [12]   1 A11   /OE   32   A [11]
A [10]   2 A9   A10   31
A [9]   3 A8   /CS1 30
A [14]   4 A13   IO8   29   D [15]
          5 /WE   IO7   28   D [14]
A [16]   6 CS2   IO6   27   D [13]
          7 A15   IO5   26   D [12]
          8 VCC   IO4   25   D [11]
          9 NC   VSS   24 DGND
A [17]   10 A16   IO3   23   D [10]
A [15]   11 A14   IO2   22   D [9]
A [13]   12 A12   IO1   21   D [8]
A [8]   13 A7   A0   20   A [1]
A [7]   14 A6   A1   19   A [2]
A [6]   15 A5   A2   18   A [3]
A [5]   16 A4   A3   17   A [4]

A [16]   1 A15   AA16 48 CP60105
A [15]   2 A14   BYTE 47
A [14]   3 A13   VSS   46 CP60106   D [15]   DGND
A [13]   4 A12   DQ15/A-1 45
A [12]   5 A11   DQ7   44   D [7]
A [11]   6 A10   DQ14 43   D [14]
A [10]   7 A9   DQ6   42   D [6]
A [9]   8 A8   DQ13 41   D [13]
3V   9 NC   DQ5   40   D [5]
         10 NC   DQ12 39   D [12]
         11 WE   DQ4   38   D [4]
         12 RESET VCC   37 CP60107 3V
         13 NC   DQ11 36   D [11]
R60101 10K/J3 CP60102 14 NC DQ3 35 D [3]
         15 RY/BY DQ10 34   D [10]
A [19] R60102 0/J3 CP60103 16 A18 DQ2 33 D [2]
A [18] R60103 0/J3 CP60104 17 A17 DQ9 32 D [9]
A [8]   18 A7   DQ1   31   D [1]
A [7]   19 A6   DQ8   30   D [8]
A [6]   20 A5   DQ0   29   D [0]
A [5]   21 A4   OE   28
A [4]   22 A3   VSS   27
A [3]   23 A2   CE   26 CP60108
A [2]   24 A1   A0   25   DGND

A [1]

3V

CP60109

C60102
0.01/UBV   DGND

C60101
0.01/UBV   3V

DGND

IC60103
KM68V1CLTE7L

A [12]   1 A11   /OE   32
A [10]   2 A9   A10   31
A [9]   3 A8   /CS1 30
A [14]   4 A13   IO8   29   D [7]
          5 /WE   IO7   28   D [6]
A [16]   6 CS2   IO6   27   D [5]
          7 A15   IO5   26   D [4]
          8 VCC   IO4   25   D [3]
          9 NC   VSS   24 DGND
A [17]   10 A16   IO3   23   D [2]
A [15]   11 A14   IO2   22   D [1]
A [13]   12 A12   IO1   21   D [0]
A [8]   13 A7   A0   20   A [1]
A [7]   14 A6   A1   19   A [2]
A [6]   15 A5   A2   18   A [3]
A [5]   16 A4   A3   17   A [4]

A [11]

CP60110   DGND

R60105
47K/J3   DGND

3V

C60103
0.01/UBV   DGND

A [20]

12
13   11

IC60011
TVHC00FTEL

WR (L)   (1)
RESET   (1)

RD (L)   (1)

D [0-15] (1)

D [0-15]

R60104 0/J3

WRL (L) (1)

RAM_CS   (1)

Ref No. 60100 Series

COMPONENT NAME	AV SYSCON (ROM)	02/11
CIRCUIT BOARD NO.	MODEL NO.	
VEP06D02A		

SCM026

AV SYSCON (PIO) 03/11

CIRCUIT BOARD NO. VEP06D02A

MODEL NO.

SCM027

AV SYSCON (EXT PIO DPR I/F)

COMPONENT NAME: AV SYSCON (EXT PIO DPR I/F) 04/11

CIRCUIT BOARD NO.: VEP06D02A

MODEL NO.

Ref No. 60300 Series

SCM028

AV SYSCON (SOL LOGIC)

CIRCUIT BOARD NO. VEP06D02A

05/11

Ref No. 60400 Series

SCM029

Grid reference numbers: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Row labels: A B C D E F G H I J K

3V

R60513 47K/J3
R60514 47K/J3
R60515 47K/J3
R60516 47K/J3
R60517 47K/J3
R60518 47K/J3
R60519 47K/J3
R60520 47K/J3

D[0-15] (1)

IC60501
TVHC245FTEL

D[7] 9	A8	B8 11	CP60511	L60501 VLP0155-T	AV_DATA[7]
D[6] 8	A7	B7 12	CP60512	L60502 VLP0155-T	AV_DATA[6]
D[5] 7	A6	B6 13	CP60513	L60503 VLP0155-T	AV_DATA[5]
D[4] 6	A5	B5 14	CP60514	L60504 VLP0155-T	AV_DATA[4]
D[3] 5	A4	B4 15	CP60515	L60505 VLP0155-T	AV_DATA[3]
D[2] 4	A3	B3 16	CP60516	L60506 VLP0155-T	AV_DATA[2]
D[1] 3	A2	B2 17	CP60517	L60507 VLP0155-T	AV_DATA[1]
D[0] 2	A1	B1 18	CP60518	L60508 VLP0155-T	AV_DATA[0]

(7), (8) AV_DATA[0-7]

EXT_D_GATE (1)
CP60509 19 G
CP60510 1 DIR

IC60502
TVHC244FTEL

RD(L) (1)
WR(L) (1)
RSTO_3V (3)
SBC_CLK (1)
SBC_DATA (1)
SBC_RQST (3)
EVR_SEL (3)

2 1A1 1Y1 18	CP60519	L60509 VLP0155-T	(4), (7), (8) AV_IORD_L
4 1A2 1Y2 16	CP60520	L60511 VLP0155-T	(4), (7), (8) AV_IOWR_L
6 1A3 1Y3 14	CP60521	L60512 VLP0155-T	(7) AV_RST_L
8 1A4 1Y4 12	CP60522	L60513 VLP0155-T	(7) AV_SBC_CLK
11 2A1 2Y1 9	CP60523	L60514 VLP0155-T	(7), (8) AV_SBC_DATA
13 2A2 2Y2 7	CP60524	L60515 VLP0155-T	(7) AV_SBC_RQST
15 2A3 2Y3 5	CP60525		(7) EVR_SEL_L
17 2A4 2Y4 3	CP60526		

CP60501
CP60502

R60508 100/J3
1 1G
19 2G

DGND

IC60503
TVHC244FTEL

CS_APROC (1)
CS_DIF_L (1)
CS_RECPB (1)
CS_AUDIO (1)
RF_CLK (3)
RF_DATA (3)
RF_EQLD_H (1)
RF_HALD_H (3)

2 1A1 1Y1 18	CP60527	L60516 VLP0155-T	(7) AV_CS_APROC
4 1A2 1Y2 16	CP60528	L60517 VLP0155-T	(7) AV_CS_DIF_L
6 1A3 1Y3 14	CP60529	L60518 VLP0155-T	(7) AV_CS_RECPB
8 1A4 1Y4 12	CP60530	L60519 VLP0155-T	(7), (8) AV_CS_AUDIO
11 2A1 2Y1 9	CP60531	L60520 VLP0155-T	(7) AV_RF_CLK
13 2A2 2Y2 7	CP60532	L60522 VLP0155-T	(7) AV_RF_DATA
15 2A3 2Y3 5	CP60533	L60522 VLP0155-T	(7) AV_RF_EQLD_H
17 2A4 2Y4 3	CP60534	L60523 VLP0155-T	(7) AV_RF_HALD_H

CP60503
CP60504
CP60505

R60509 100/J3
1 1G
19 2G

DGND

R60504 3V 47K/J3

DIF_INTD (7)

R60512

IC60504
TVHC244FTEL

A[1-20] (1)

(1) INTD

AV_ADRS[1-12] (7), (8) AV_ADRS[1-12]

A[12]	2 1A1 1Y1 18	CP60535	L60524 VLP0155-T	AV_ADRS[12]
A[11]	4 1A2 1Y2 16	CP60536	L60525 VLP0155-T	AV_ADRS[11]
A[10]	6 1A3 1Y3 14	CP60537	L60526 VLP0155-T	AV_ADRS[10]
A[9]	8 1A4 1Y4 12	CP60538	L60527 VLP0155-T	AV_ADRS[9]
A[8]	11 2A1 2Y1 9	CP60539	L60528 VLP0155-T	AV_ADRS[8]
A[7]	13 2A2 2Y2 7	CP60540	L60529 VLP0155-T	AV_ADRS[7]
A[6]	15 2A3 2Y3 5	CP60541	L60530 VLP0155-T	AV_ADRS[6]
	17 2A4 2Y4 3	CP60542		

100/J3
R60510
1 1G
19 2G

DGND

IC60505
TVHC244FTEL

3V
R60503 47K/J3

A[5]	2 1A1 1Y1 18	CP60543	L60531 VLP0155-T	AV_ADRS[5]
A[4]	4 1A2 1Y2 16	CP60544	L60532 VLP0155-T	AV_ADRS[4]
A[3]	6 1A3 1Y3 14	CP60545	L60533 VLP0155-T	AV_ADRS[3]
A[2]	8 1A4 1Y4 12	CP60546	L60534 VLP0155-T	AV_ADRS[2]
A[1]	11 2A1 2Y1 9	CP60547	L60535 VLP0155-T	AV_ADRS[1]

IF_INT (10)
AV_INT (10)
SBC_AV_DATA (7)

R60505 10/J3 CP60506 13 2A2 2Y2 7
R60506 10/J3 CP60507 15 2A3 2Y3 5
R60507 10/J3 CP60508 17 2A4 2Y4 3

(1) INTL
(1) INTR
(1) FROM_SBC_DATA

R60511 100/J3
1 1G
19 2G

DGND

3V
IC60501 TVHC245FTEL
IC60502 TVHC244FTEL
IC60503 TVHC244FTEL
IC60504 TVHC244FTEL
IC60505 TVHC244FTEL

20 V		20 V		20 V		20 V		20 V	
10	C60501 0.01/U8V	10	C60502 0.01/U8V	10	C60503 0.01/U8V	10	C60504 0.01/U8V	10	C60505 0.01/U8V
G		G		G		G		G	

DGND

Ref No. 60500 Series

COMPONENT NAME	AV SYSCON (BUS I/F)	06/11
CIRCUIT BOARD NO.		MODEL NO.
VEP06D02A		

AV SYSCON (MOTHER CONNECT)

P60601
VJP4064Q160

A	NO	B
AGND	1 / 81	DGND
AGND	2 / 82	DGND
D3V	3 / 83	D5V
D3V	4 / 84	D5V
AV_CS_DIF_L	5 / 85	AV_BUSY_DIF_L
OSD_DATA	6 / 86	OSD_CLK
OSD_RST	7 / 87	OSD_CS
INCOME_FRM	8 / 88	EXTRA
EXTRA	9 / 89	EXTRA
EXTRA	10 / 90	EXTRA
EXTRA	11 / 91	EXTRA
EXTRA	12 / 92	EXTRA
EXTRA	13 / 93	EXTRA
REF_FRAME	14 / 94	EXTRA
DGND	15 / 95	EXTRA
FEND_SYS	16 / 96	FAN_NG
AV_SBC_DATA	17 / 97	AV_RST_L
AV_SBC_RQST	18 / 98	SBC_AV_DATA
AV_SBC_CLK	19 / 99	DGND
EXTRA	20 / 100	FRP1
DIF_INTD	21 / 101	OUT_D1
AV_CS_RECPB	22 / 102	AV_CS_AUDIO_
AV_IORD_L	23 / 103	AV_IOWR_L
AV_DATA[6]	24 / 104	AV_DATA[7]
AV_DATA[4]	25 / 105	AV_DATA[5]
AV_DATA[2]	26 / 106	AV_DATA[3]
AV_DATA[0]	27 / 107	AV_DATA[1]
AV_ADRS[11]	28 / 108	AV_ADRS[12]
AV_ADRS[9]	29 / 109	AV_ADRS[10]
AV_ADRS[7]	30 / 110	AV_ADRS[8]
AV_ADRS[5]	31 / 111	AV_ADRS[6]
AV_ADRS[3]	32 / 112	AV_ADRS[4]
AV_ADRS[1]	33 / 113	AV_ADRS[2]
DGND	34 / 114	AV_CS_APROC
EXTRA	35 / 115	VR_REF_
EXTRA	36 / 116	VR_REC_CH1
EXTRA	37 / 117	VR_REC_CH2
EXTRA	38 / 118	M16V
SV_LOCK_H	39 / 119	BATT_LOW_H
EXTRA	40 / 120	EVR_SEL_L
SYS_FR_DATA	41 / 121	DGND
SYS_FR_CLK	42 / 122	FR_SYS_DATA
R_ST_MT_ON_H	43 / 123	DGND
R_ST_SPEED3	44 / 124	SOL_12V
R_ST_SPEED1	45 / 125	R_ST_MT_FWD
S_BRK_ON(H)	46 / 126	R_ST_SPEED2
S_PHOTO	47 / 127	S_BRK_OFF(H)
FPS0	48 / 128	PHT_LED(H)
LOAD_FG	49 / 129	TEST(L)
DEW_IN	50 / 130	CL_SOL_ON(H)
SV_FRP	51 / 131	DEW_GND
TSR	52 / 132	T_END
FRAME_CTL	53 / 133	T_START
EXT_DET_L	54 / 134	CAP_FG
THIN_TAPE_L	55 / 135	CAP_FWD_L
D5V	56 / 136	T_REEL_FWD_L
SOL_NG(L)	57 / 137	D5V
SYS_SRV_CLK	58 / 138	CL_SOL_NG(L)
SYS_SRV_DATA	59 / 139	POWER_OF_RQ
DGND	60 / 140	SRV_SYS_DATA
CAS_DOWN_H	61 / 141	AGND
CAS_UP_L	62 / 142	CAS_DWN_SW(L)
CAS2_H	63 / 143	CAS_MID_H
CAS1_H	64 / 144	P_RESET
CAS_IN_L_H	65 / 145	REEL_POS2_H
CAS_IN_R_H	66 / 146	REEL_POS1_H
MECHA_POS3_L	67 / 147	C_TXD
MECHA_POS2_L	68 / 148	R_TXD
MECHA_POS1_L	69 / 149	R_C_CLK
LOAD_SPEED5	70 / 150	S_TAB_SW
LOAD_SPEED3	71 / 151	LOAD_SPEED6
LOAD_SPEED1	72 / 152	LOAD_SPEED4
LOAD_M_ON_H	73 / 153	LOAD_SPEED2
PINCH_OFF(H)	74 / 154	F_LOAD_M_ON_H
M_STOPR_OF_H	75 / 155	LOAD/UNLOAD
T_PHOTO	76 / 156	PINCH_ON(H)
T_BRK_ON(H)	77 / 157	M_STOPR_ON_H
DGND	78 / 158	T_BRK_OFF(H)
AV_RF_EQLD_H	79 / 159	AV_RF_HALD_H
AV_RF_CLK	80 / 160	AV_RF_DATA

Left side signals:
AV_DATA[0-7] (6)
AV_ADRS[1-12] (6)
AV_CS_DIF_L (6)
OSD_DATA (9)
OSD_RST (9)
INCOME_FRM (9)
REF_FRAME (9)
FEND_SYS (1)
AV_SBC_DATA (6)
AV_SBC_RQST (6)
AV_SBC_CLK (6)
DIF_INTD (6)
AV_CS_RECPB (6)
AV_IORD_L (6)
SV_LOCK_H (3)
IF_FR_DATA (9)
IF_FR_CLK (4)
R_ST_MT_ON_H (4)
R_ST_SPEED1 (3)
S_BRK_ON(H) (5)
S_PHOTO (1)
FPS0 (8)
DEW_IN (3)
SV_FRP (1)
TSR (1),(8)
FRAME_CTL (1),(3)
THIN_TAPE_L (3)
SOL_NG(L) (1)
SYS_SRV_CLK (1)
SYS_SRV_DATA (1)
CAS_DOWN_H (3)
CAS_UP_L (3)
CAS2_H (3)
CAS1_H (3)
CAS_IN_L_H (3)
CAS_IN_R_H (3)
MECHA_POS3_L (3)
MECHA_POS2_L (3)
MECHA_POS1_L (3)
LOAD_SPEED5 (3)
LOAD_SPEED3 (3)
LOAD_SPEED1 (3)
LOAD_M_ON_H (4)
PINCH_OFF(H) (5)
M_STOPR_OF_H (5)
T_PHOTO (1)
T_BRK_ON(H) (5)
AV_RF_EQLD_H (6)
AV_RF_CLK (6)

Right side signals:
FAN_NG (3)
AV_RST_L (6)
SBC_AV_DATA (6)
FRP1 (1)
OUT_D1 (4)
AV_CS_AUDIO (6)
AV_IOWR_L (6)
AV_CS_APROC
VR_REC_CH1 (1)
VR_REC_CH2 (1)
M16V
BATT_LOW_H (3)
EVR_SEL_L (6)
FR_IF_DATA (9)
SOL_12V (5)
R_ST_MT_FWD (4)
R_ST_SPEED2 (3)
S_BRK_OFF(H) (5)
PHT_LED(H) (3)
TEST(L) (3)
CL_SOL_ON(H) (3)
DEW_GND
T_END (3)
T_START (3)
CAP_FG (1)
CAP_FWD_L (3)
T_REEL_FWD_L (3)
CL_SOL_NG(L) (3)
POWER_OF_RQ (5)
SRV_SYS_DATA (1),(8)
CAS_DWN_SW(L) (3)
CAS_MID_H (3)
P_RESET (1),(5)
REEL_POS2_H (3)
REEL_POS1_H (3)
C_TXD (8)
R_TXD (8)
R_C_CLK (8)
S_TAB_SW (3)
LOAD_SPEED6 (3)
LOAD_SPEED4 (3)
LOAD_SPEED2 (3)
F_LOAD_M_ON_H (4)
LOAD/UNLOAD (4)
PINCH_ON(H) (5)
M_STOPR_ON_H (5)
T_BRK_OFF(H) (5)
AV_RF_HALD_H (6)
AV_RF_DATA (6)

OSD_CLK (9)
OSD_CS (9)

Power sections:
FL60601 VLF0941C223T — 3V — +3V (AVSYS)
C60604 6V47/EVV, C60605 VCK0152 16V10/3225
FL60602 VLF0941C223T — 5V — +5V (AVSYS)
C60606 16V47/EVV, C60607 VCK0152 16V10/3225
FL60603 VLF0941C223T — 5V_IF — +5V (INTERFACE)
C60608 16V47/EVV, C60609 VCK0152 16V10/3225

CP60603, CP60604, CP60605, CP60606, CP60607
CP60609, CP60610, CP60611, CP60612, CP60613, CP60615, CP60616, CP60617
CP60618, CP60619, CP60620, CP60621, CP60622, CP60623, CP60624, CP60625, CP60626
CP60608 (6) AV_CS_APROC
CP60614
CP60627 (1) VR_REC_CH1
CP60628 (1) VR_REC_CH2
CP60629 (1) M16V
CP60630 (6) EVR_SEL_L

R60603 0/J3
R60604 0/J3
R60605 0/J3
R60606 0/J3
R60607 0/J3
R60608 0/J3
R60611 PAT/J3
R60612 PAT/J3
R60609 0/J3
R60610 0/J3

C60601 L60601 100/2C 3V
C60603 0.01/0BV 100/2C
DGND, AGND

Ref No. 60600 Series

COMPONENT NAME	AV SYSCON (MOTHER CONNECT)	07/11
CIRCUIT BOARD NO.		MODEL NO.
VEP06D02A		

SCM031

AVSYS JIG

AVSYS PARALLEL WRITE

IF FLASH WRITE

P60801 VJS3791D050

AV_CS_AUDIO (6)	1	3V
AV_IORD_L (6)	2	3V
AV_IOWR_L (6)	3	AV_CS_AUDIO
CP60802	4	AV_IORD_L
AV_DATA[0-7] (6)	5	AV_IOWR_L
	6	AV_DATA[0]
AV_DATA[0]	7	AV_DATA[1]
AV_DATA[1]	8	AV_DATA[2]
AV_DATA[2]	9	AV_DATA[3]
AV_DATA[3]	10	AV_DATA[4]
AV_DATA[4]	11	AV_DATA[5]
AV_DATA[5]	12	AV_DATA[6]
AV_DATA[6]	13	AV_DATA[7]
AV_DATA[7]	14	AV_ADRS[1]
AV_ADRS[1-12] (6)	15	AV_ADRS[2]
AV_ADRS[1]	16	AV_ADRS[3]
AV_ADRS[2]	17	AV_ADRS[4]
AV_ADRS[3]	18	AV_ADRS[5]
AV_ADRS[4]	19	AV_ADRS[6]
AV_ADRS[5]	20	AV_ADRS[7]
AV_ADRS[6]	21	AV_ADRS[8]
AV_ADRS[7]	22	AV_ADRS[9]
AV_ADRS[8]	23	AV_ADRS[10]
AV_ADRS[9]	24	AV_ADRS[11]
AV_ADRS[10]	25	AV_ADRS[12]
AV_ADRS[11]	26	SYS_SRV_CLK
AV_ADRS[12]	27	SYS_SRV_DATA
SYS_SRV_CLK (1)	28	SRV_SYS_DATA
SYS_SRV_DATA (1)	29	DGND
SRV_SYS_DATA (1)	30	DGND
	31	C_TXD
C_TXD (7)	32	R_TXD
R_TXD (7)	33	R_C_CLK
R_C_CLK (7)	34	
CP60803	35	
CP60804	36	
CP60805	37	
CP60806	38	INVARID_L
INVARID_L (1)	39	JIG(L)
JIG(L) (1),(4)	40	FRP
FRP (1),(7)	41	TSR
TSR (7)	42	FPS0
FPS0 (7)	43	
CP60807	44	
CP60808	45	P90
P90 (1)	46	FLASH_WRITE
FLASH_WRITE (6)	47	RxD
AV_SBC_DATA (1)	48	TxD
TxD (1)	49	5V
CP60801 5V	50	5V

P60803 PAT/VJS3791D050

A[1-20] (1)	1	3V
	2	3V
A[1]	3	A[1]
A[2]	4	A[2]
A[3]	5	A[3]
A[4]	6	A[4]
A[5]	7	A[5]
A[6]	8	A[6]
A[7]	9	A[7]
A[8]	10	A[8]
A[9]	11	A[9]
A[10]	12	A[10]
A[11]	13	A[11]
A[12]	14	A[12]
A[13]	15	A[13]
A[14]	16	A[14]
A[15]	17	A[15]
A[16]	18	A[16]
A[17]	19	A[17]
A[18]	20	A[18]
A[19]	21	A[19]
A[20]	22	A[20]
D[0]	23	D[0]
D[1]	24	D[1]
D[2]	25	D[2]
D[3]	26	D[3]
D[4]	27	D[4]
D[5]	28	D[5]
D[0-15] (1)	29	DGND
	30	DGND
D[6]	31	D[6]
D[7]	32	D[7]
D[8]	33	D[8]
D[9]	34	D[9]
D[10]	35	D[10]
D[11]	36	D[11]
D[12]	37	D[12]
D[13]	38	D[13]
D[14]	39	D[14]
D[15]	40	D[15]
MASTER_ENABLE (1)	41	MASTER_ENABLE
	42	BUS_ENABLE
FLASH_COPY (1)	43	FLASH_COPY
WR(L) (1)	44	WR(L)
RD(L) (1)	45	RD(L)
CP60820	46	FLASH_WRITE
CP60821	47	
CP60822	48	
5V	49	5V
	50	5V

P60804 VJS3791D020

FLASHWRITE_L_IF (9) FLASHWRITE_L_IF CP60826	1	FLASHWRITE_L_IF
19200_H (9) 19200_H	2	19200_H
V_MPU_MODE (9) V_MPU_MODE	3	DSW1(ON INT ROM)
CP60827	4	DSW2
CP60828	5	DSW5
CP60829	6	DSW6
CP60830	7	DSW7
CP60831	8	DSW8
	9	5v
5V_IF	10	5v
	11	
CP60832	12	232C TXD
RXD_IF (9) CP60823 RXD_IF	13	232C RXD
TXD_IF (9) CP60824 TXD_IF	14	INVARID_L
INVARID_L_IF (9) CP60825 INVARID_L_IF	15	
CP60833	16	
CP60834	17	
CP60835	18	
CP60836	19	DGND
	20	DGND

DGND

AVSYS FLASH WRITE

P60802 VJS3791D020

	1	DSW1
	2	DSW2
CP60809	3	
CP60810	4	
CP60811	5	DSW5
CP60812	6	DSW6
CP60813	7	DSW7
CP60814	8	DSW8
3V	9	3V
	10	3V
CP60815	11	
	12	TxD
	13	RxD
	14	INVARID_L
CP60816	15	
CP60817	16	
CP60818	17	
CP60819	18	
	19	DGND
	20	DGND

DGND

Ref No. 60800 Series

COMPONENT NAME	AV SYSCON (JIG I/F)	08/11
CIRCUIT BOARD NO.		MODEL NO.
VEP06D02A		

SCM032

AV SYSCON (I/F MICON)

COMPONENT NAME: AV SYSCON (I/F MICON) 09/11
CIRCUIT BOARD NO.: VEP06D02A
MODEL NO.

Ref No. 60900 Series

SCM033

COMPONENT NAME	AV SYSCON (IF MEMORY)	10/11
CIRCUIT BOARD NO.		MODEL NO.
VEP06D02A		

SCM034

TXD_IF >> (9)

2 1 3
IC61101
TVHC126FTEL

RS232C
SEND/RECIVE

5V_IF

C61101
0.01/08V

V
14
7
G

IC61101
TVHC126FTEL

DGND

RXD_IF << (9)

8 10 9
IC61101
TVHC126FTEL

9P_SEND >> (9)

5 4 6
IC61101
TVHC126FTEL

RS422A
SEND/RECIVE

9P_RECIEVE << (9)

11 13 12
IC61101
TVHC126FTEL

REMOTE_SEL_0 >> (9)
REMOTE_SEL_1 >> (9)

R61101 PAT/J3
R61102 PAT/J3

R61103 0/J3
R61105 0/J3

P61101
VJS3406D009

R61109 0/J3 CP61107
R61110 0/J3 CP61108
R61111 0/J3 CP61109

1 TxD
2 DSR
3 RxD
4 R0_L
5 R1_L
6 OPTION1
7 OPTION2
8 DGND
9 5V

DSR_IF >> (9)

R0_L << (9)
R1_L << (9)

CP61110
5V_IF CP61111

R61104 47K/J3
R61106 47K/J3

DGND

DGND

Option Board
RS232C or RS422A

	R0_L	R1_L
RS232C	High	Low
RS422A	Low	High

3V

EYF6CU TP61101
EYF6CU TP61102

R61112 47K/J3
R61113 47K/J3

P61102
VJS3406D009

R61107 0/J3

INT_TC_L << (1)

INT_LTCR_H << (1)

R61108 0/J3

CP61101
CP61102

1 DGND
2 INT_TC_L
3 DGND
4 INT_LTCR_H
5 DGND
6 OPTION
7 OPTION
8 OPTION
9 OPTION

CP61103
CP61104
CP61105
CP61106

DGND

Option Board
EXT_TC IN/OUT

Ref No. 61100 Series

COMPONENT NAME	AV SYSCON(OPTION BOARD)	11/11
CIRCUIT BOARD NO.		MODEL NO.
VEP06D02A		

SCM035

COMPONENT NAME	VIDEO I/O(Y/C SEP)	02/12
CIRCUIT BOARD NO.		MODEL NO.
VEP03F01A		

SCM037

PAT=PATTERN ONLY

Ref No. 30200Series.

VIDEO I/O(SYNC SEP)

03/12

COMPONENT NAME: VIDEO I/O(SYNC SEP)

CIRCUIT BOARD NO.: VEP03F01A

MODEL NO.

SCM038

VIDEO I/O(PLL & CF DET)   06/12

CIRCUIT BOARD NO.   MODEL NO.

VEP03F01A

SCM041

FSC >> (6)

+5VD

C30701
0.1/UFV

+3VD

IC30702
TC7SH08FUTL

0.1/UFV
C30703

R30709 0/J3

1
5
2
3
4

(1) >> CP_SYNC_3

44 43 42 41 40 39 38 37 36 35 34
MCK HSYNC VDD2 DO2 DO1 VSS1 TST2 TST1 RECO CF15I PB0

1 SEA30O
2 RECEEO
3 SEA30I
4 RECEEI
5 INSYNC
6 ESYNC
7 EXTL
8 SYNCO
9 VPOUT
10 FPLUSO
11 FPLUSI

IC30701
MN53015VZW

CF30I 33
PSCTL 32
FG2   31
FG1   30
FONH   29
VREFG 28
VLCKL 27
ADVD   26
NFO   25
F30N   24
F30O   23

R30703
10K/RE7

CSYNC >> (3,6)

R30704
10K/RE7

R30706
0/J3

CP30701

R30702
10K/RE7

R30705
0/J3

12 13 14 15 16 17 18 19 20 21 22
VDL0 VDL1 HH0 HH1 NVYSCL VDD1 VSS2 OPT1 MNTSCL VREFO VREFI

C30702
0.1/UFV

R30707
0/J3

R30708
10K/RE7

+5VD

FRM
TP30701
EYF6CU

+3VD

IC30703
TC7SH08FUTL

0.1/UFV
C30704

R30710 0/J3

1
5
2
3
4

(1) >> INCOME_FRM_3

(6) >> INCOME_FRM

R30701
10K/RE7

+5VD

FRM_DET >> (1)

PAT=PATTERN ONLY
Ref No. 30700 Series

COMPONENT NAME	VIDEO I/O(BUFF OSC)	07/12
CIRCUIT BOARD NO.		MODEL NO.
VEP03F01A		

SCM042
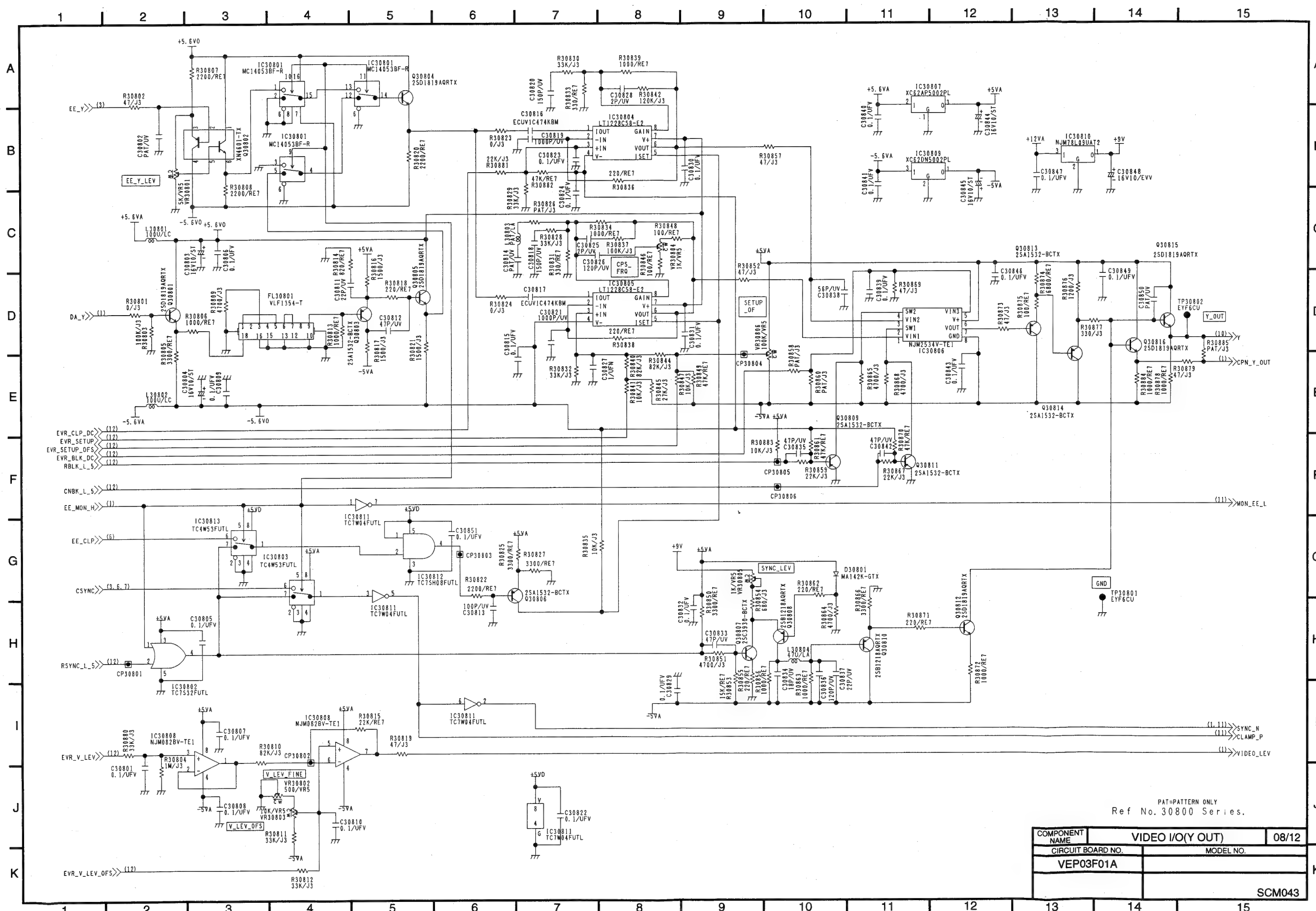
VIDEO I/O(Y OUT)

Ref No. 30800 Series.

PAT=PATTERN ONLY

COMPONENT NAME: VIDEO I/O(Y OUT) — 08/12

CIRCUIT BOARD NO.: VEP03F01A
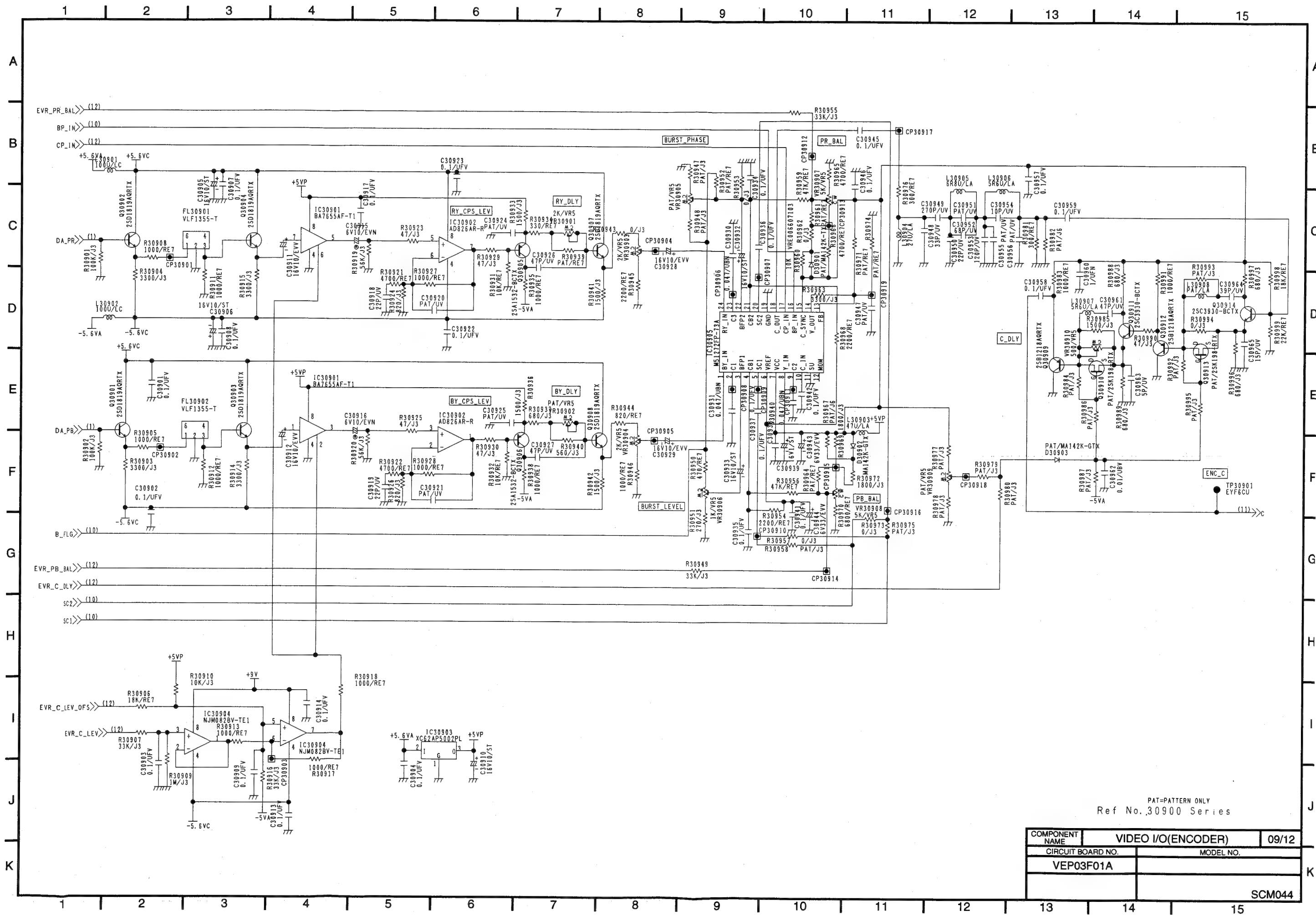
MODEL NO.

SCM043

COMPONENT NAME	VIDEO I/O(ENCODER)	09/12
CIRCUIT BOARD NO.		MODEL NO.
VEP03F01A		

SCM044

VIDEO I/O(SC QUADRATURE) 10/12

CIRCUIT BOARD NO. VEP03F01A
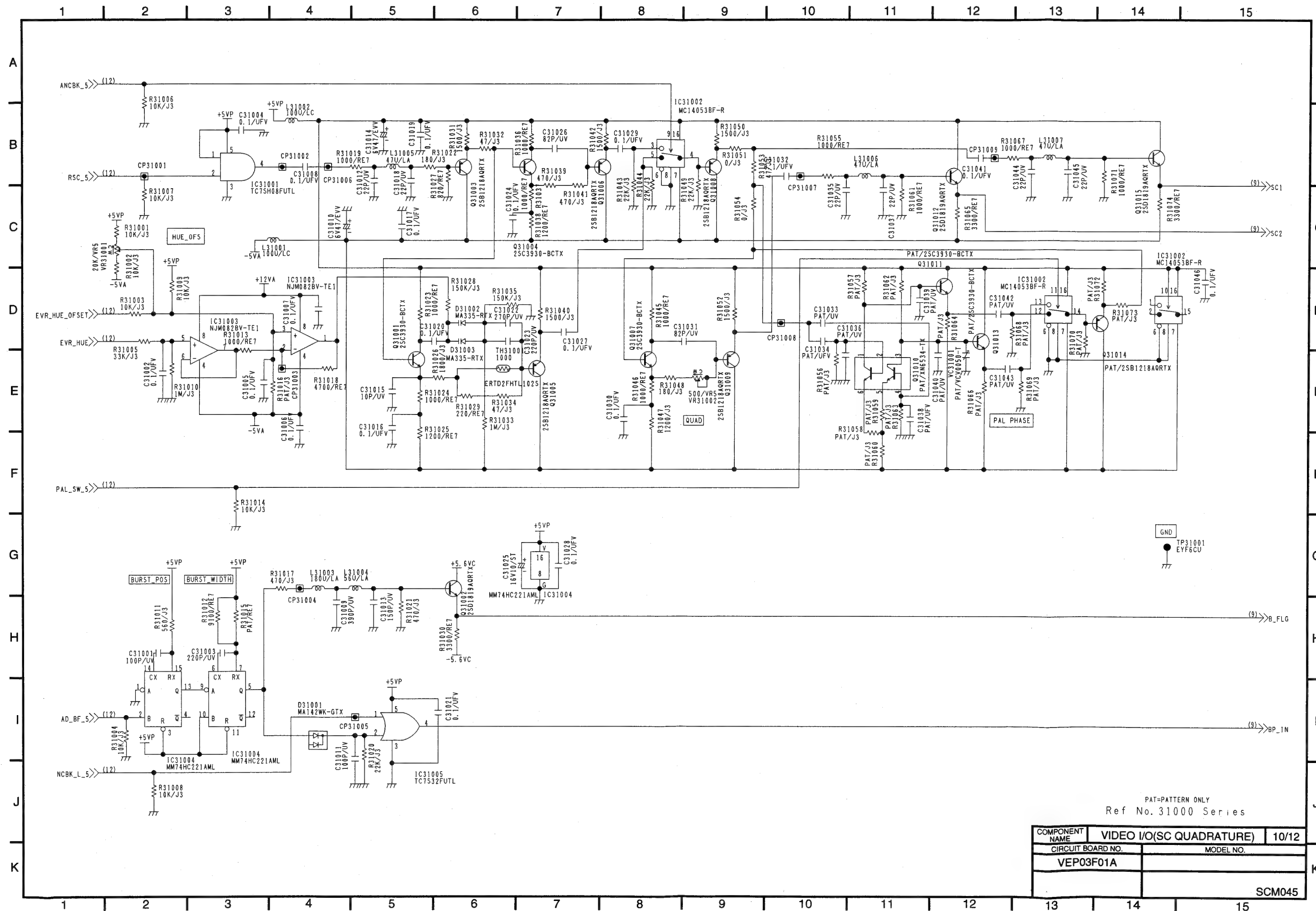
SCM045

PAT=PATTERN ONLY
Ref No. 31000 Series

IC31201 TVHCT244FSEL

CLK135M (1) — 1A1 1Y1 — R31210 100/RE7 — (6) CLK135M_5
ADCK_Y (1) — 1A2 1Y2 — R31211 100/RE7 — (5) ADCK_Y_5
ADCK_PR (1) — 1A3 1Y3 — R31212 100/RE7 — (5) ADCK_PR_5
ADCK_PB (1) — 1A4 1Y4 — R31213 100/RE7 — (5) ADCK_PB_5
KILL_H (1) CP31201 — 2A1 2Y1 — R31214 100/RE7 — (2,6,11) KILL_H_5
R31208 100/RE7 — 2A2 2Y2 — R31215 PAT/J3
CCLP_N (1) — 2A3 2Y3 — R31216 100/RE7 — (5) CCLP_N_5
YCLP_N (1) — 2A4 2Y4 — R31217 100/RE7 — (5) YCLP_N_5

R31227 100Ω/0S

(9) CP_IN

IC31202 TVHCT244FSEL

AD_BF (1) — 1A1 1Y1 — R31218 100/RE7 — (10) AD_BF_5
RSC (1) — 1A2 1Y2 — R31219 100/RE7 — (10) RSC_5
NCBK_L (1) — 1A3 1Y3 — R31220 100/RE7 — (10) NCBK_L_5
ANCBK (1) — 1A4 1Y4 — R31221 100/RE7 — (10) ANCBK_5
CNBK_L (1) — 2A1 2Y1 — R31222 100/RE7 — (8) CNBK_L_5
RBLK_L (1) — 2A2 2Y2 — R31223 100/RE7 — (8) RBLK_L_5
PAL_SW (1) — 2A3 2Y3 — R31224 100/RE7 — (10) PAL_SW_5
RSYNC_L (1) — 2A4 2Y4 — R31225 100/RE7 — (8) RSYNC_L_5

EE_MON_H (1,8) — R31207 100/RE7
R31209 PAT/J3
R31226 10K/J3

+5VD
C31201 0.1/UFV   C31202 0.1/UFV
IC31201 TVHCT244FSEL   IC31202 TVHCT244FSEL

+5.6VA IC31203 XC62AP3002PL
C31207 0.1/UFV   C31208 16V10/ST
C31206 0.1/UFV

+5VD
R31201 10K/RE7 R31204 100/RE7
AV_RF_DATA (1)
C31203 22P/UV

+5VD
R31202 10K/RE7 R31205 100/RE7
AV_RF_CLK (1)
C31204 22P/UV

+5VD
R31203 10K/RE7 R31206 100/RE7
EVR_SEL_L (1)
C31205 22P/UV

IC31204 M62370GP

CP31209
CP31208
CP31207
CP31206
CP31205

A011 A010 A09 A08 A07 A06 A05 A04 A03 A02 A01 A036

CP31202 — D1
CLK
LD
D0
GND
C0
VSS1
VDD1
CP31203 — A012
A013
A014
A015

CP31204
A016 A017 A018 A019 A020 A021 A022 A023 A024 A025 A026 A027

A035 — (2) EVR_EE_C_LEV
A034 — (2) EVR_CPS_AD_LEV
A033 — (5) EVR_Y_CP_DC
A032 — (5) EVR_PR_CP_DC
VSS2 — (5) EVR_PB_CP_DC
VDD2 — (6) EVR_AXIS
C1 — (8) EVR_V_LEV
VCC — (8) EVR_V_LEV_OFS
A031 — (8) EVR_SETUP
A030 — (8) EVR_SETUP_OFS
A029 — (8) EVR_BLK_DC
A028

C31211 0.1/UFV
C31209 0.1/UFV
C31210 0.1/UFV

(8) EVR_CLP_DC
(1) SC_COARSE0
(1) SC_COARSE1
(1) SYS_SC_PHASE
(1) EVR_V_PHASE
(1) EVR_S_PHASE
(1) EVR_H_PHASE
(10) EVR_HUE
(10) EVR_HUE_OFSET
(9) EVR_C_LEV_OFS
(9) EVR_C_LEV
(9) EVR_C_DLY
(9) EVR_PB_BAL
(9) EVR_PR_BAL

CP31210

*PAT=PATTERN ONLY
Ref No. 31200 Series.

COMPONENT NAME	TBC(INPUT TBC)	02/07
CIRCUIT BOARD NO.		MODEL NO.
VEP03E32B		

TBC(PLL EE)

COMPONENT NAME: TBC(PLL EE) 03/07

CIRCUIT BOARD NO.: VEP03E32B
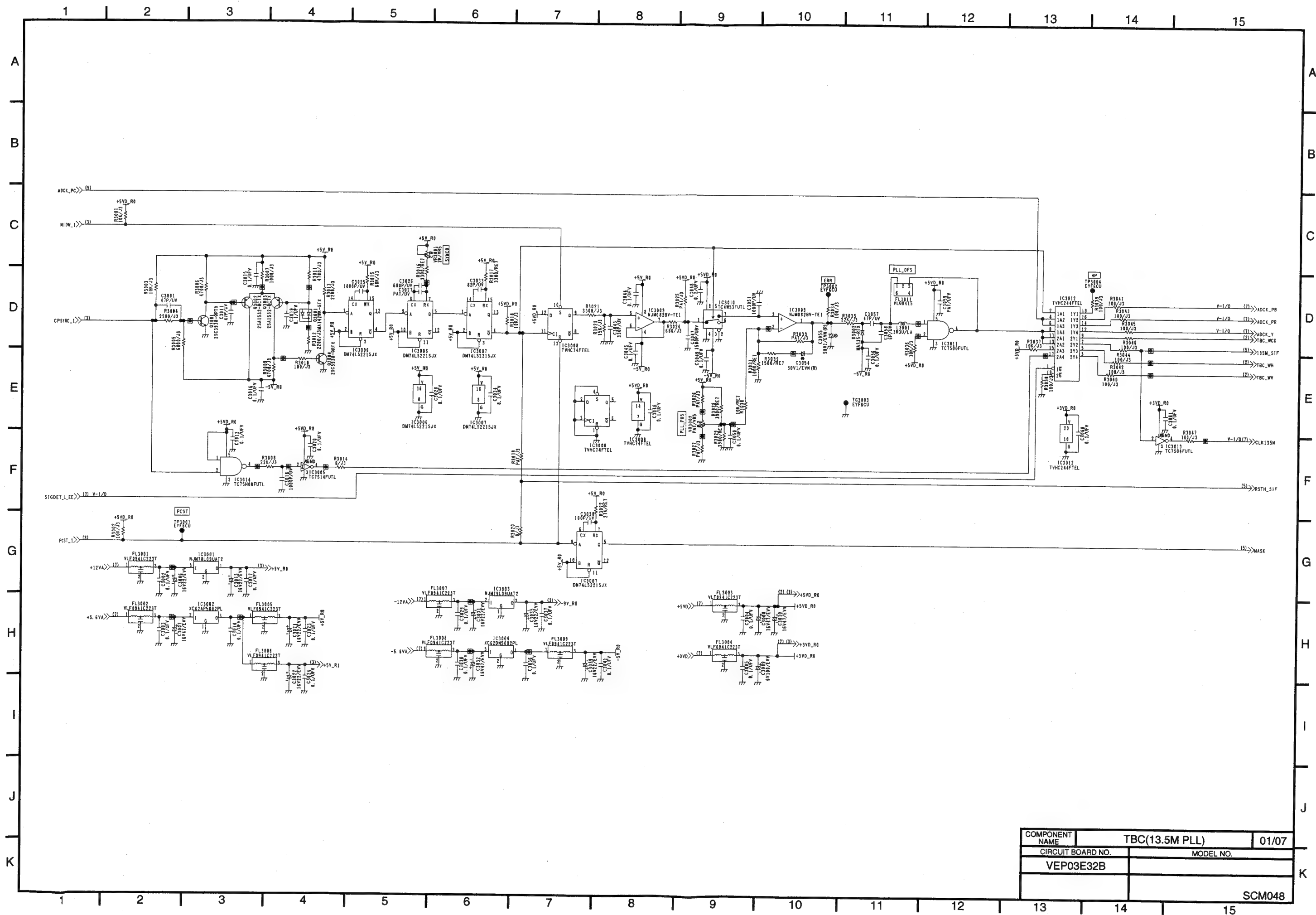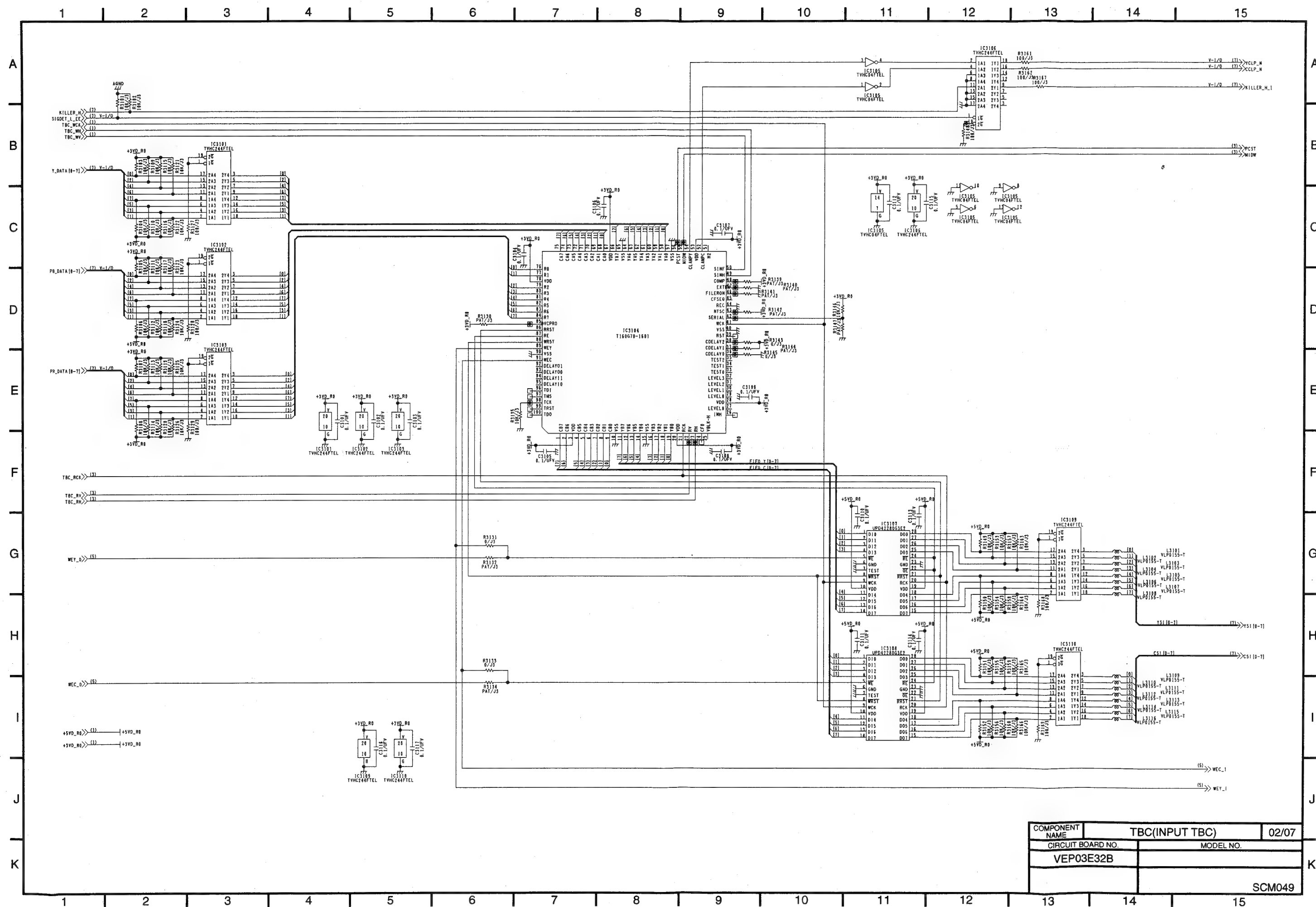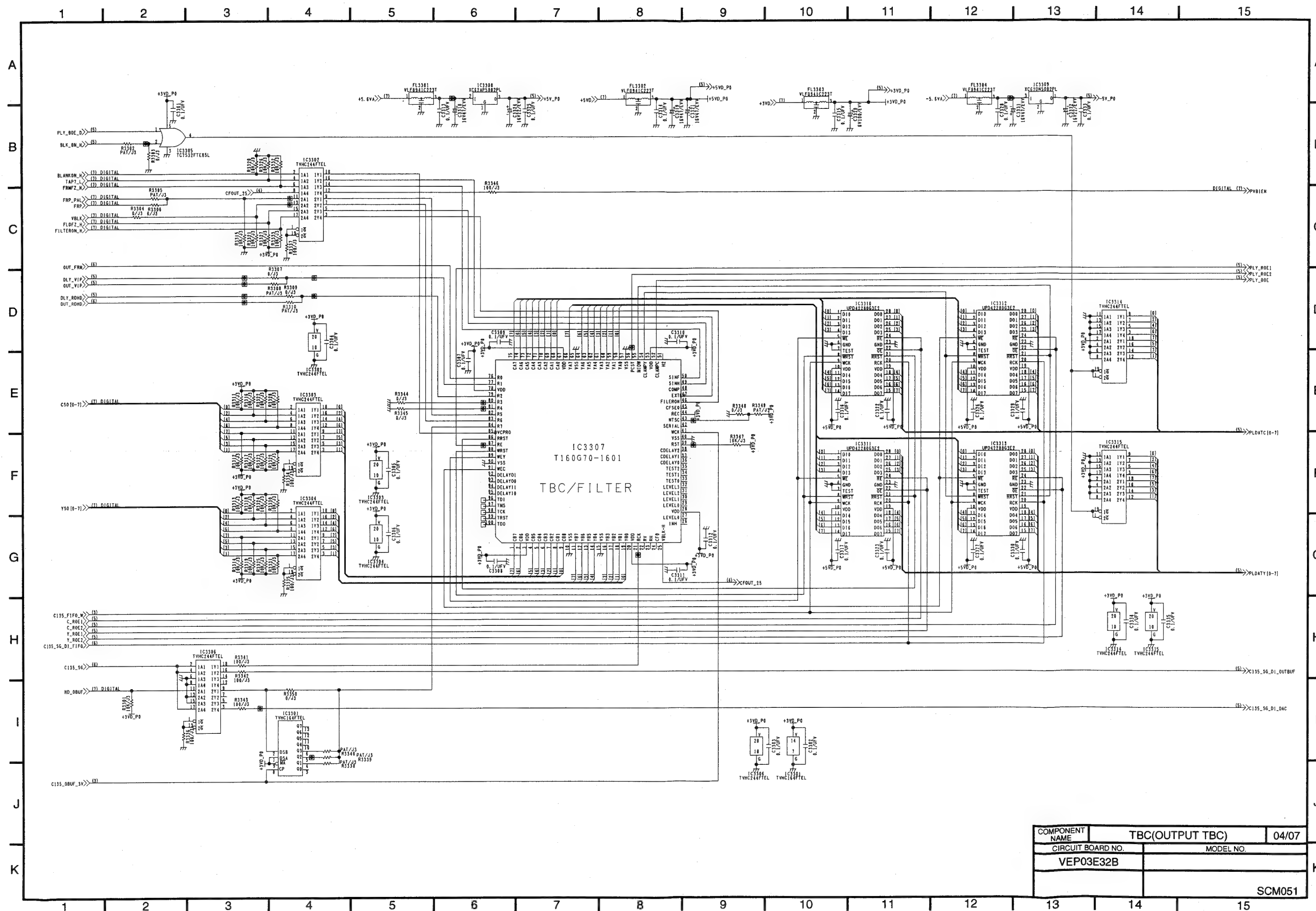
MODEL NO.

SCM050

TBC(OUTPUT TBC) 04/07

CIRCUIT BOARD NO. VEP03E32B

MODEL NO.

SCM051

TBC(OUTPUT BUFFER)

CIRCUIT BOARD NO. VEP03E32B

MODEL NO.

05/07

SCM052

A B C D E F G H I J K

VJP3657
P3981

Pin	Signal	Signal	Pin
TSR_Q (5)	TSR_Q	TR_SLOW_H	80	60	TR_SLOW_H (5)
FPS1_R (5)	FPS1_R	FRP_Q	79	59	FRP_Q (5)
FPS0_R (5)(4)	FPS0_R	PRE_FRP	78	58	PRE_FRP (3)
FRP (5)	FRP	PRE_INV	77	57	PRE_INV (3)
TSR (5)	TSR	FRP_SYS	76	56	FRP_SYS (3)
	GND	GND	75	55	REG_FRP (3)
PB_DATA6 [6]	PB_DATA6	PB_DATA7	74	54	PB_DATA7 [7]
PB_DATA4 [4]	PB_DATA4	PB_DATA5	73	53	PB_DATA5 [5]
PB_DATA2 [2]	PB_DATA2	PB_DATA3	72	52	PB_DATA3 [3]
PB_DATA0 [0]	PB_DATA0	PB_DATA1	71	51	PB_DATA1 [1]
	GND	ADCK_PB	70	50	ADCK_PB (1)
PR_DATA6 [6]	PR_DATA6	PR_DATA7	69	49	PR_DATA7 [7]
PR_DATA4 [4]	PR_DATA4	PR_DATA5	68	48	PR_DATA5 [5]
PR_DATA2 [2]	PR_DATA2	PR_DATA3	67	47	PR_DATA3 [3]
PR_DATA0 [0]	PR_DATA0	PR_DATA1	66	46	PR_DATA1 [1]
	GND	ADCK_PR	65	45	ADCK_PR (1)
Y_DATA6 [6]	Y_DATA6	Y_DATA7	64	44	Y_DATA7 [7]
Y_DATA4 [4]	Y_DATA4	Y_DATA5	63	43	Y_DATA5 [5]
Y_DATA2 [2]	Y_DATA2	Y_DATA3	62	42	Y_DATA3 [3]
Y_DATA0 [0]	Y_DATA0	Y_DATA1	61	41	Y_DATA1 [1]
	GND	ADCK_Y	60	40	ADCK_Y (1)
CLK135V (3)	CLK135V	CCLP_N	59	39	CCLP_N (2)
INF (5)	INF	YCLP_N	58	38	YCLP_N (2)
INH (3)	INH	INV	57	37	INV (3)
	GND	GND	56	36	
YSI6 [6]	YSI6	YSI7	55	35	YSI7 [7]
YSI4 [4]	YSI4	YSI5	54	34	YSI5 [5]
YSI2 [2]	YSI2	YSI3	53	33	YSI3 [3]
YSI0 [0]	YSI0	YSI1	52	32	YSI1 [1]
	GND	GND	51	31	
CSI6 [6]	CSI6	CSI7	50	30	CSI7 [7]
CSI4 [4]	CSI4	CSI5	49	29	CSI5 [5]
CSI2 [2]	CSI2	CSI3	48	28	CSI3 [3]
CSI0 [0]	CSI0	CSI1	47	27	CSI1 [1]
	GND	OUT_FRM	46	26	OUT_FRM_A (5)
CLK18V (3)	CLK18V	FRP_PAL	45	25	FRP_PAL (4)
HD_OBUF (4)	HD_OBUF	CPSYNC	44	24	CPSYNC (1)
HD_SHUF (6)	HD_SHUF	PALP	43	23	PALP (6)
RSC (6)	RSC	CLK135M	42	22	CLK135M (1)
INCOME_FRM (1)(4)(6)	INCOME_FRM	INCOME_CFO	41	21	INCOME_CFO (3)
+3VD (1)(4)(6)	+3VD	+3VD	40	20	+3VD (1)(4)(6)
	+3VD	+3VD	39	19	
	GND	GND	38	18	
	GND	GND	37	17	
+5VD (1)(4)(6)	+5VD	+5VD	36	16	+5VD (1)(4)(6)
	+5VD	+5VD	35	15	
CNBK_L (6)	CNBK_L	NCBK_L	34	14	NCBK_L (6)
CLAMP (6)	ANCBK	RBLK_L	33	13	RBLK_L (6)
ADBF (6)	ADBF	SIGDET_L_EE	32	12	SIGDET_L_EE (1)(2)
KILLER_H_1 (2)	KILLER_H_1	RSYNC_L	31	11	RSYNC_L (6)
	GND	DA_PB	30	10	PBDAOUT (5)
REF_IN (6)	REF_IN	DA_PR	29	09	PRDAOUT (5)
	GND	DA_Y	28	08	YDAOUT (5)
VIDEO_LEV (5)	VIDEO_LEV	GND	27	07	
H_PHASE (6)	H_PHASE	SYS_SC_PHASE	26	06	SYS_SC_PHASE (6)
SCH_PHASE (6)	SCH_PHASE	VIDEO_PHASE	25	05	VIDEO_PHASE (6)
	GND	GND	24	04	
YSO6 [6]	YSO6	YSO7	23	03	YSO7 [7]
YSO4 [4]	YSO4	YSO5	22	02	YSO5 [5]
YSO2 [2]	YSO2	YSO3	21	01	YSO3 [3]
YSO0 [0]	YSO0	YSO1	20	00	YSO1 [1]
	GND	GND	19	99	
CSO6 [6]	CSO6	CSO7	18	98	CSO7 [7]
CSO4 [4]	CSO4	CSO5	17	97	CSO5 [5]
CSO2 [2]	CSO2	CSO3	16	96	CSO3 [3]
CSO0 [0]	CSO0	CSO1	15	95	CSO1 [1]
	GND	C18_APROC	14	94	
DIF_FRP (3)	DIF_FRP	C18_APROC	13	93	C18_APROC (3)
DIF_IN_L (3)	DIF_IN_L	INH_A	12	92	INH_A (3)
CLK18_OP (3)	CLK18_OP	GND	11	91	
	GND	GND	10	90	
-5.6VA (1)(4)(6)	-5.6VA	-5.6VA	9	89	-5.6VA (1)(4)(6)
	-5.6VA	-5.6VA	8	88	
	GND	GND	7	87	
	GND	GND	6	86	
+5.6VA (1)(4)(6)	+5.6VA	+5.6VA	5	85	+5.6VA (1)(4)(6)
	+5.6VA	+5.6VA	4	84	
	GND	GND	3	83	
+12VA (1)(6)	+12VA	+12VA	2	82	+12VA (1)(6)
-12VA (1)	-12VA	-12VA	1	81	-12VA (1)
	A	ON	B		

Y_DATA [0-7] (2)
PR_DATA [0-7] (2)
PB_DATA [0-7] (2)

CSI [0-7] (2)
YSI [0-7] (2)

CSO [0-7] (4)
YSO [0-7] (4)

P3902
VJS3826C040

	Signal	Pin	Signal	
VBLK (4)	R3901 0/J3	1		
		2	VBLK	
	R3902 0/J3	3		
TEST_EE_L (3)		4	EE_TEST_L_5V	
KILLER_H (2)		5	KILLER_H	
VFLOAT_H (6)		6	VFLOAT_H	
	CP3901	7	VFLOAT_SEL	
VMUTE_L (5)		8	V_MUTE_L	
ADV1_S (5)		9	ADV1_S	
RP_SEL_L (5)		10	RP_SEL_L	
INCOME_L (3)		11	INCOME_L	
ADVANCE_L (3)		12	ADVANCE_L	
FRMFZ_H (4)		13	FRMFZ_H	
FLDFZ_H (4)		14	FLDFZ_H	
CFEN_L (3)		15	CFEN_L	
CFFORCE_H (3)		16	CFFORCE_H	
SCH1 (6)		17	SCH1	
SCH2 (6)		18	SCH2	
RSCH (6)		19	RSCH	
BLANKON_H (4)		20	BLANKON_H	
TAP7_L (4)		21	TAP7_L	
FILTERON_H (4)		22	FILTERON_H	
REC_SIG_L (3)		23	REC_SIG_L	
REC_FPS0 (3)		24	REC_FPS0	
REC_FPS1 (3)		25	REC_FPS1	
SIGDET (6)		26	SIGDET_P10	
	R3904 0/J3	27		
		28	REC_L_D	
	R3905 0/J3	29		
PVBIEN (4)	R3906 0/J3	30	PVBIEN	
		31		
OUT_FRM_D (5)	R3907 0/J3	32	OUT_FRM	
		33		
		34	REG_FRP	
	R3908 0/J3	35		
SYS_SC_COARSE0 (6)		36	SC_COARSE0	
SYS_SC_COARSE1 (6)		37	SC_COARSE1	
		38		
		39		
SG_VX01_FL (6)		40	SG_VX01_FL	

COMPONENT NAME	TBC(INTERFACE)	07/07
CIRCUIT BOARD NO.		MODEL NO.
VEP03E32B		

SCM054

PRE_SHUFFLE

IC3701
PAT/CG25123-5106

Ref No. 3700 Series.

COMPONENT NAME	DIGITAL CORE(PRE SHUFFLE)	01/12
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F00A		

SCM055

Ref No. 3950 Series.

COMPONENT NAME	DIGITAL CORE(CLK BUFF)	02/12
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F00A		

SCM056

DIGITAL CORE(COMP/AUDIO) 04/12

CIRCUIT BOARD NO. VEP03F00A

MODEL NO.

Ref No. 3100 Series.

SCM058

DIGITAL CORE(ECC)

COMPONENT NAME

CIRCUIT BOARD NO.
VEP03F00A

MODEL NO.
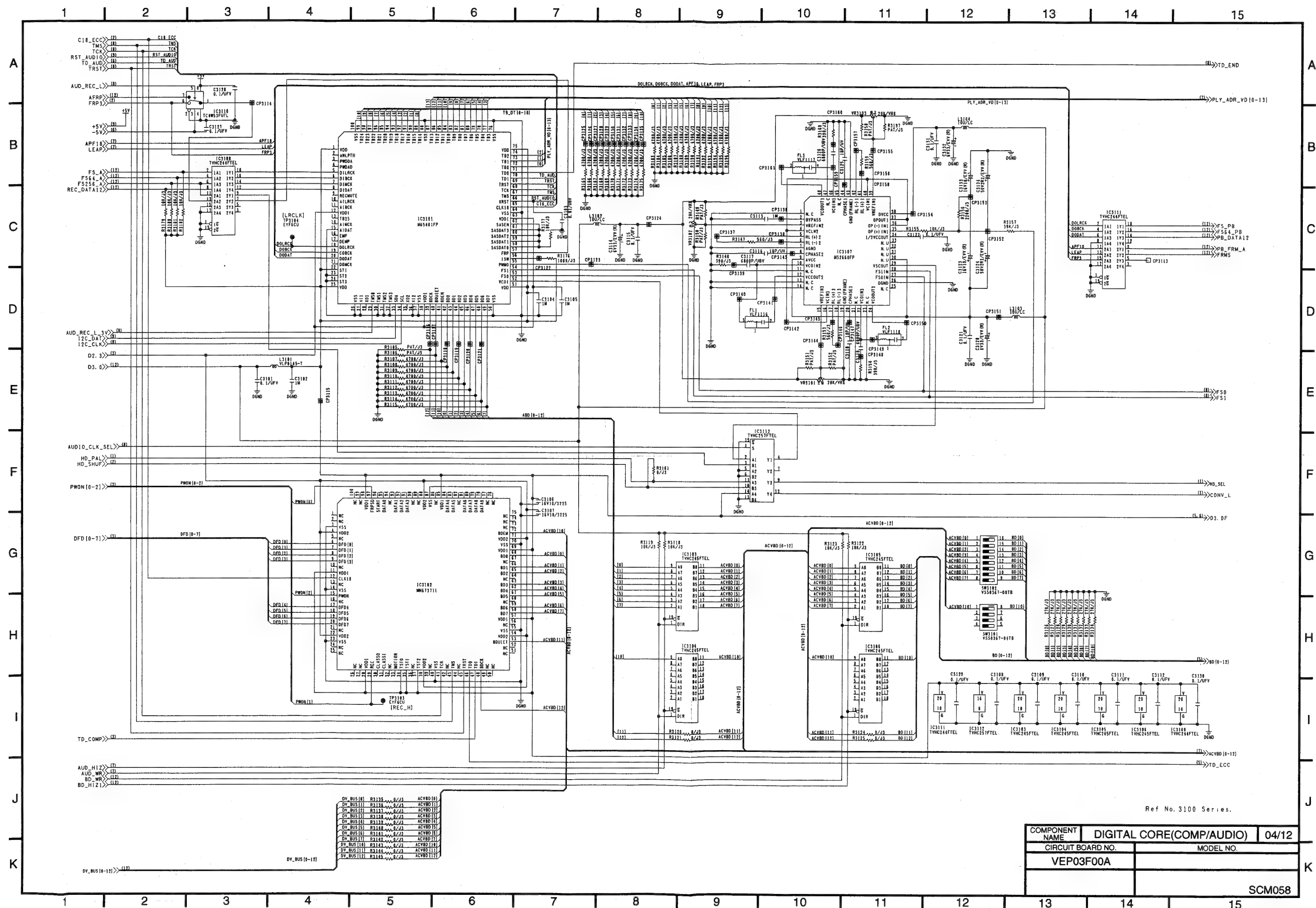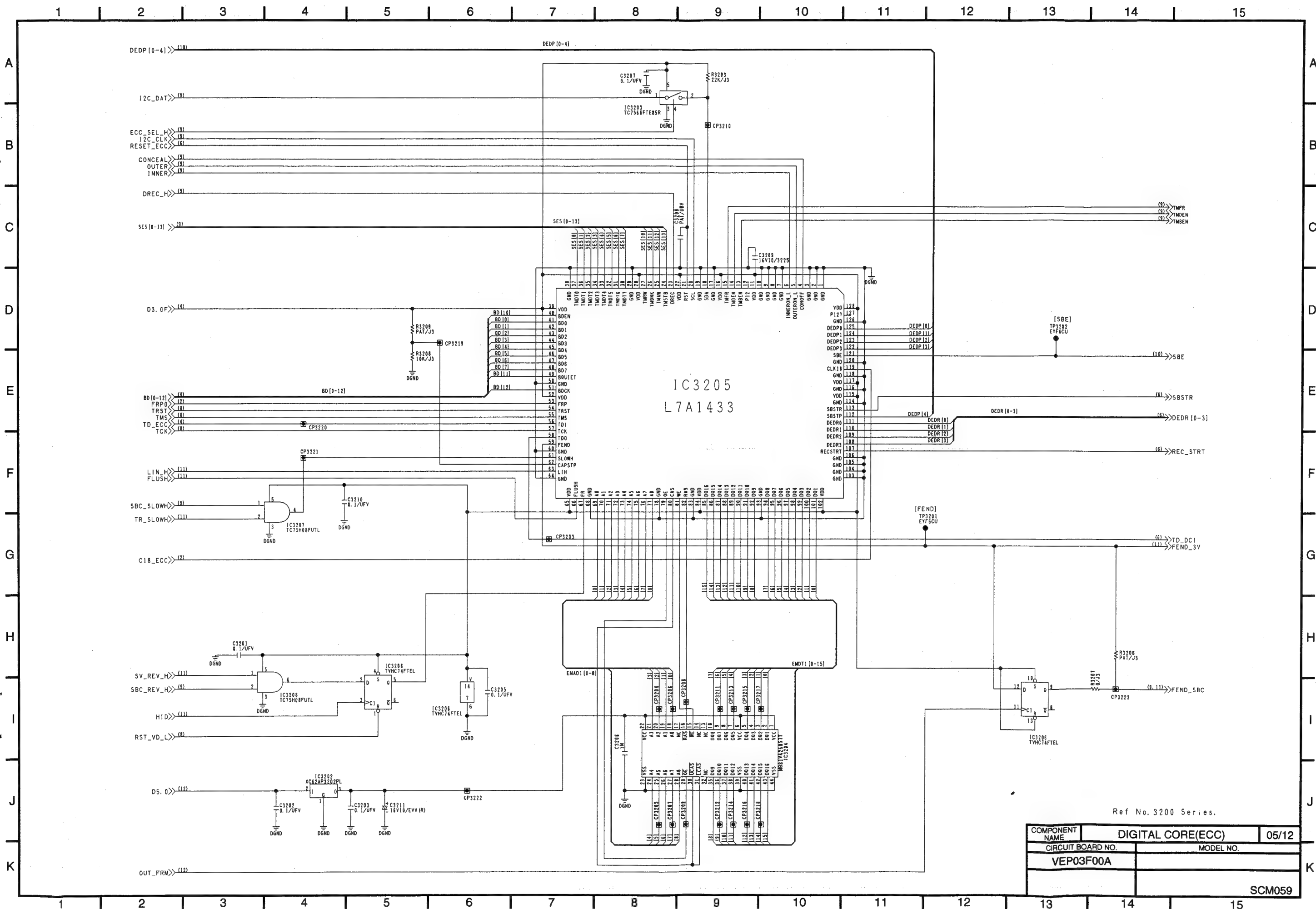
05/12

SCM059

Ref No. 3200 Series.

COMPONENT NAME	DIGITAL CORE(DCI)	06/12
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F00A		

SCM060

IC3401
UPD65868D022

VIDEO DATA

Ref No. 3400 Series.

COMPONENT NAME	DIGITAL CORE(VIDEO DATA)	07/12
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F00A		
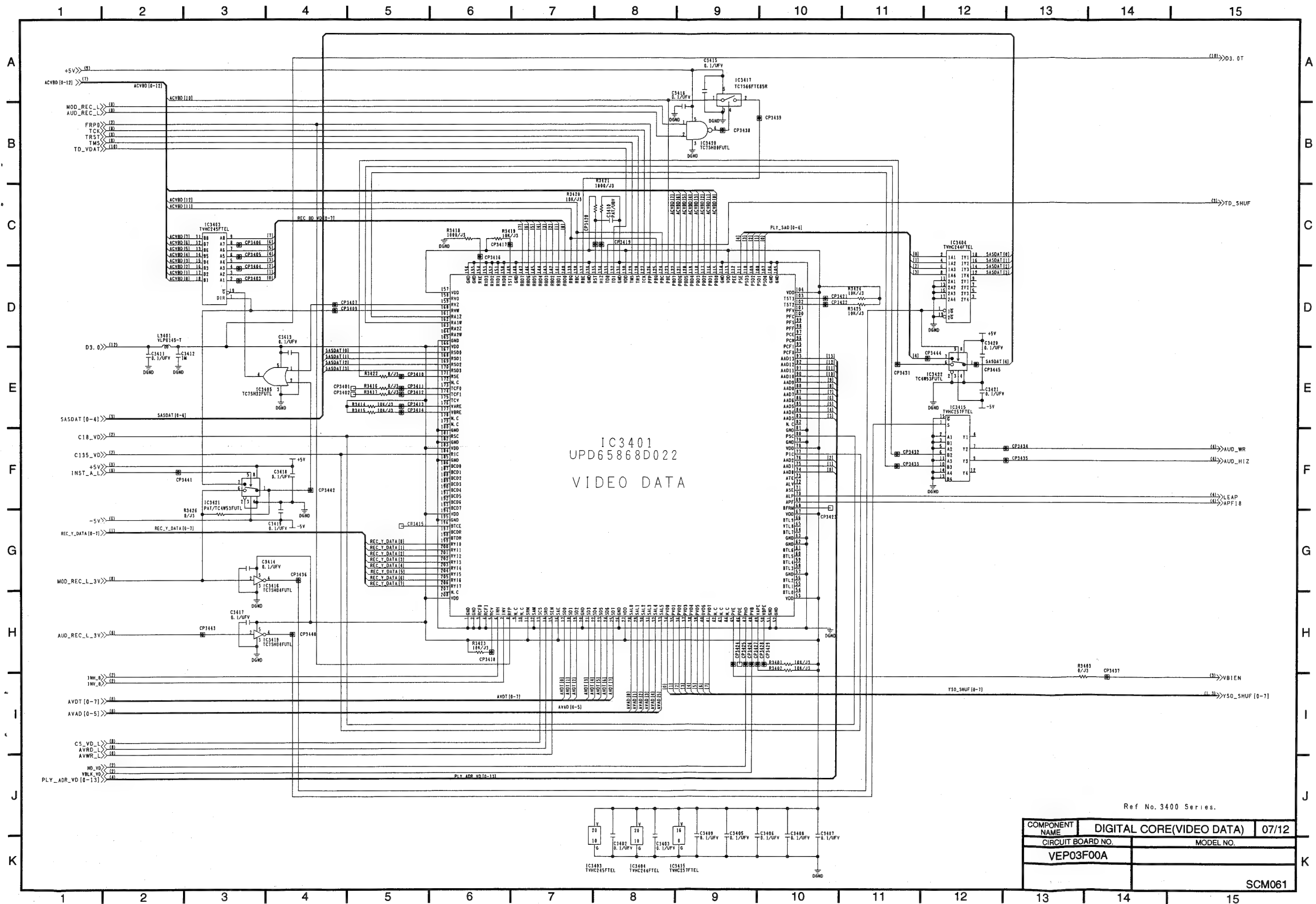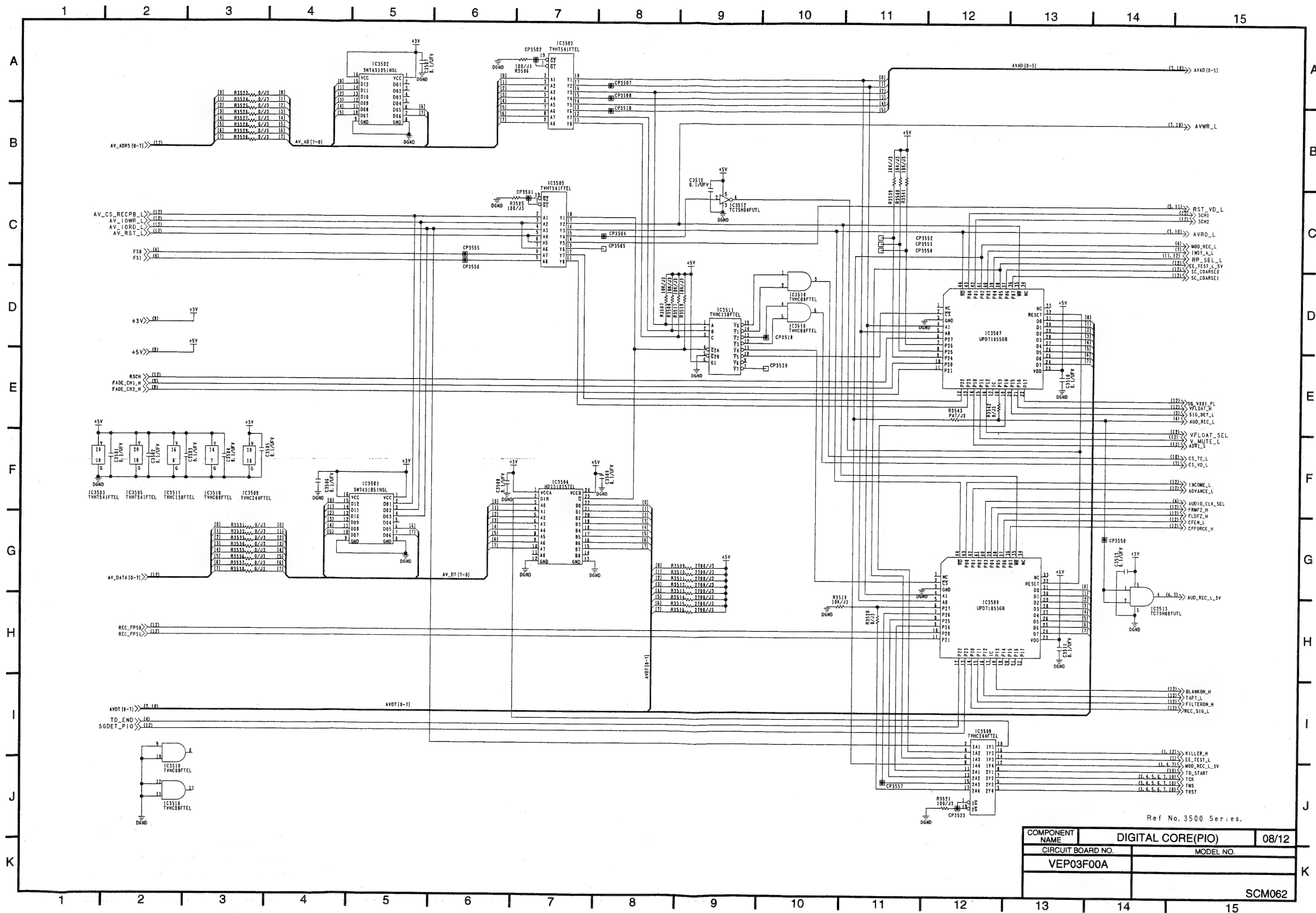
SCM061

DIGITAL CORE(PIO) 08/12

CIRCUIT BOARD NO. VEP03F00A
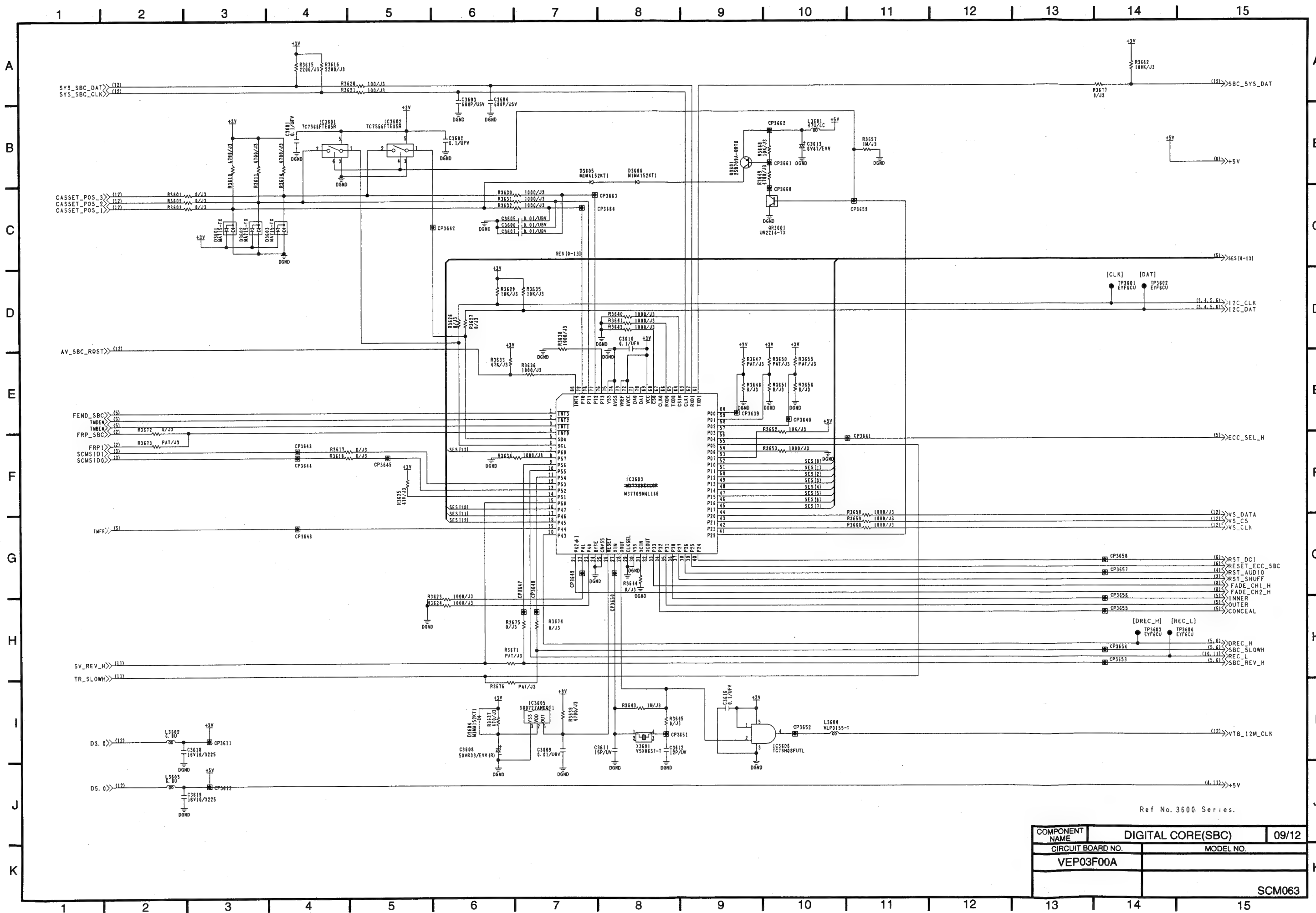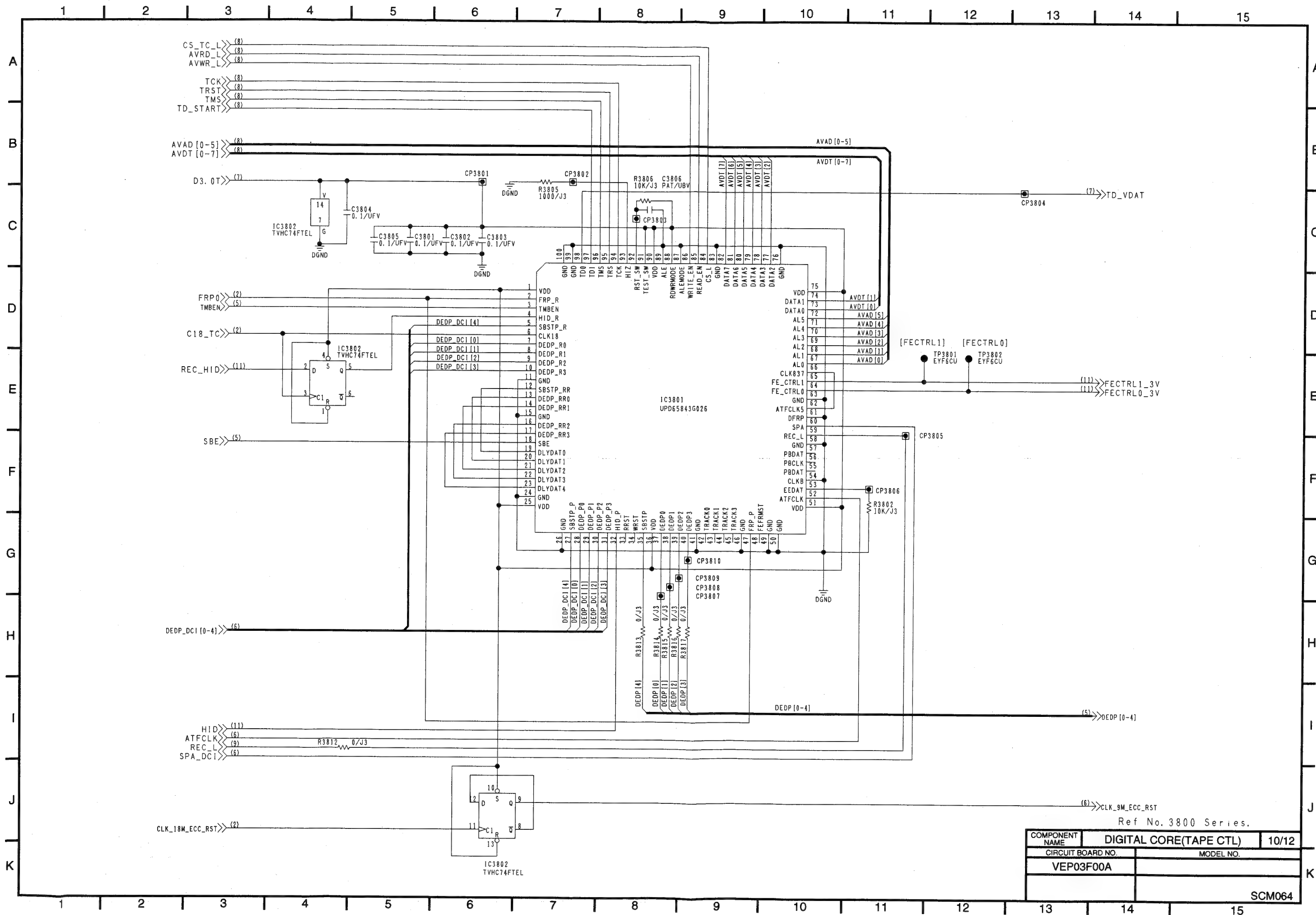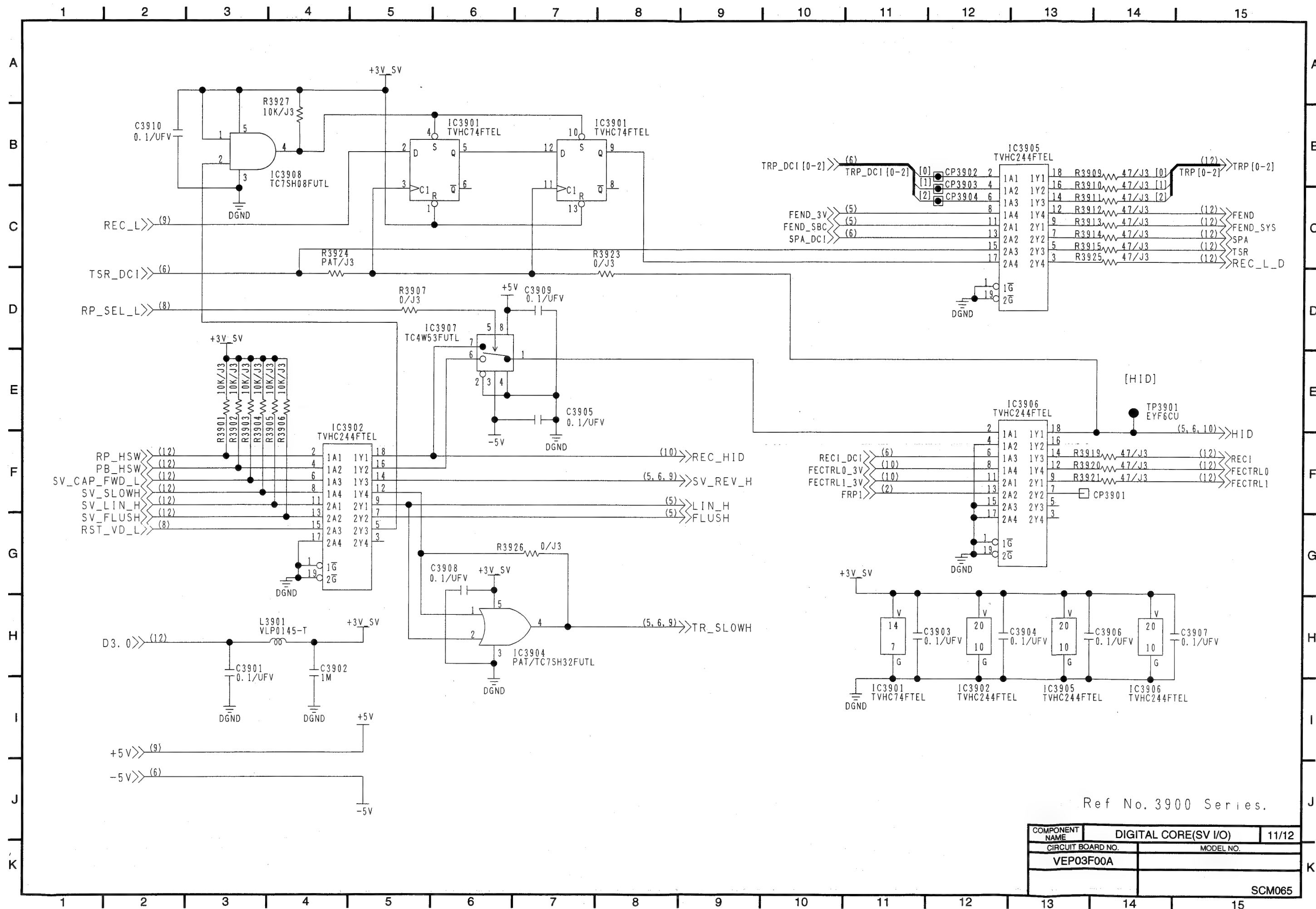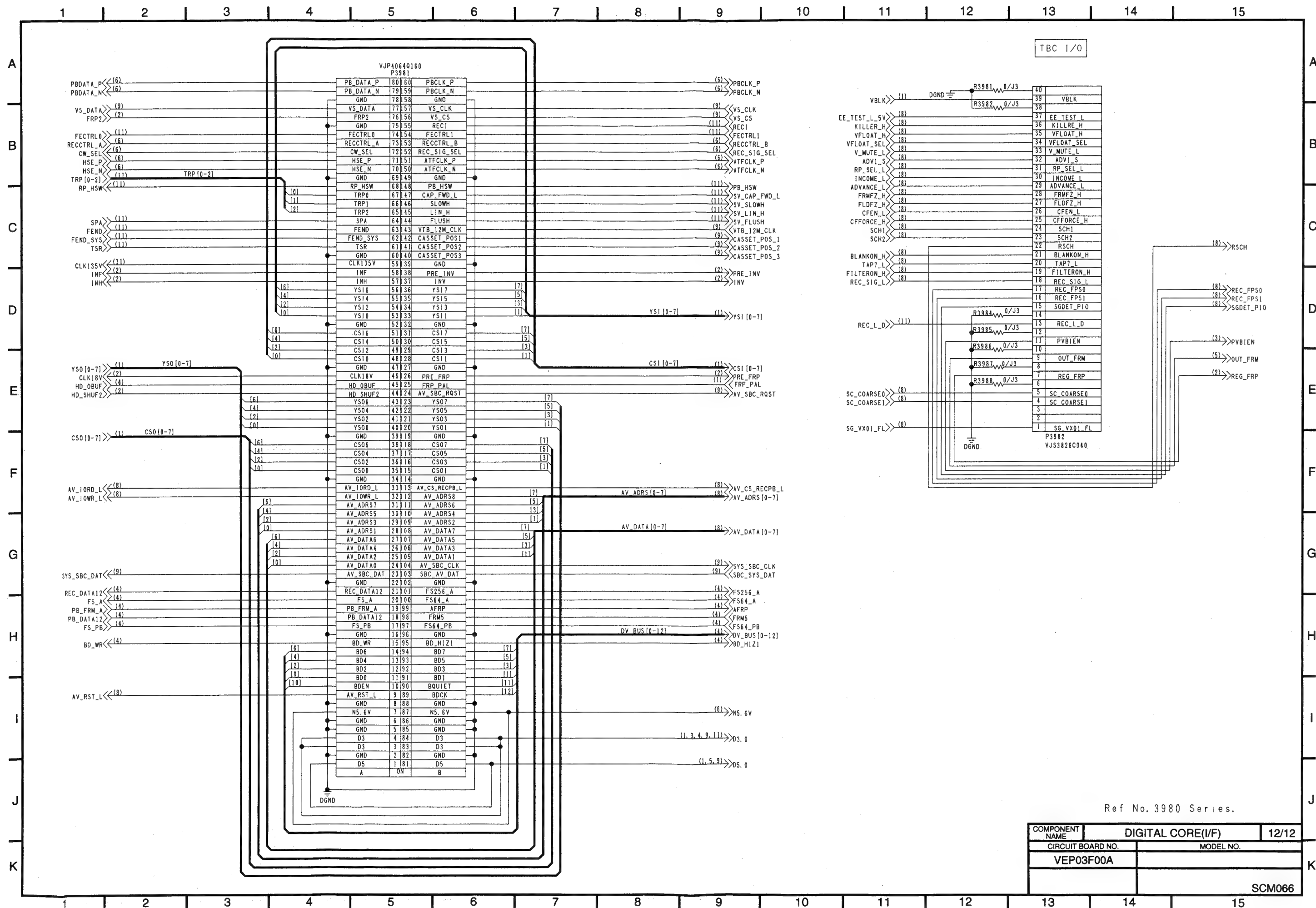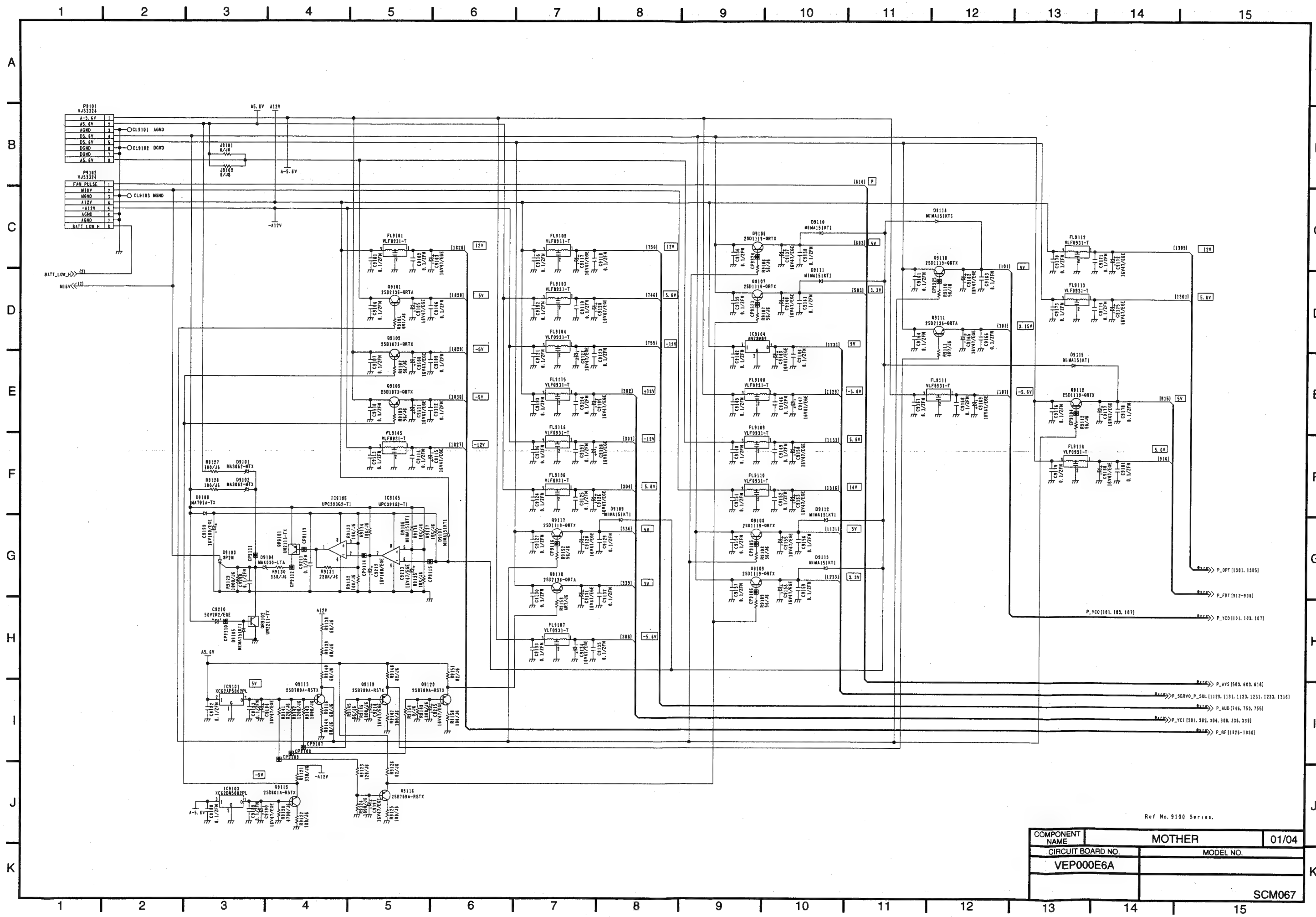
MODEL NO.

SCM062

Ref No. 3600 Series.

COMPONENT NAME	DIGITAL CORE(SBC)	09/12
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F00A		

SCM063

Ref No. 3900 Series.

COMPONENT NAME	DIGITAL CORE(SV I/O)	11/12
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F00A		

SCM065

COMPONENT NAME	MOTHER	02/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP000E6A		

Ref No. 9300 Series.

SCM068

RF2 [579, 580, 679, 680]

RF1 [168-180, 268, 270-280, 836]

(AV SYS) RF2 [579, 580, 679, 680]

(VTB 12M CLK) D_CORE [263]

(Y/C CORE) RF1 [168-180, 268, 270-280, 836]

[1125] R9501 PAT/J6 [4801]
[1126] R9502 PAT/J6 [479]
[1127] R9503 PAT/J6 [3791]

SERVO3 [379, 479, 4801]   (e×t8) SERVO3 [3791, 4791, 4801]

SERVO2 [378-380, 479]   (e×t8) SERVO2 [378-380, 479]

ERP_TP [1223, 1228]

SERVO1 [161-167, 260-267, 555, 581]
(Y/C CORE)
(AV SYS)
SERVO4 [543-577, 644-678]

SERVO_1
P9504   VJP3949C070H

	A	NO	B	
[167]	TRP0	1	TRP1	[166]
[165]	TRP2	2	TSR	[380]
[479]	FRP	3	SPA	[164]
	PFP0	4	PFP1	[163]
CL1104 [264]	FLUSH	5	FEND	
CL1106	CF0	6	CF1	[581]
CL1107	CF2	7	SV LOCK H	
	S_M_CUR	8	PCF2	[379]
CL1110	FPS0	9	FPS1	
	JOG0	10	JOG1	
		11		
	ATF_ERR	12	LIVE_CTL	
	RTV_SPD_PB	13	REC_HEAD_L	
	AGND	14	AGND	
	AGND	15	REFCLK	
	AGND	16	AGND	
	ATF1	17	AGND	
	PB_ENV	18	RP_ENV	
	RP_HSW	19	FE_HSW	
	PB_HSW	20		
		21	CAPSTP_H	
[266]	SLOW_H	22	LIN_H	
[267]	CAP_FWD_L	23	S_ERR	
	TENSION_TP	24	TENSION_VR	
[1125]	EVR_TEN	25	CASSET_POS_1	[262]
[1126]	EVR_SRL	26	CASSET_POS_2	[261]
[1127]	EVR_TRL	27	THIN_TAPE_L	[555]
[1129]	-5R6V	28	T_ERR	[1228]
	-5R6V	29	T_M_GND	
[1131]	+5V	30	9V	[1231]
	+5V	31	9V	
[1133]	A5.6V	32	+3V	[1233]
	A5.6V	33	+3V	
	AGND	34	DGND	
	AGND	35	DGND	

SERVO_2
P9505   VJP3949C070H

	A	NO	B	
[577]	T_BRK_ON(H)	1	T_BRK_OFF(H)	[678]
[576]	T_PHOTO	2	M_STOPPER_ON_H	[677]
[575]	M_STOPPER_OFF_H	3	PINCH_ON(H)	[676]
[574]	PINCH_OFF(H)	4	LOAD/UNLOAD	[675]
[573]	LOAD_M_ON_H	5	F_LOAD_M_ON_H	[674]
[572]	LOAD_SPEED1	6	LOAD_SPEED2	[673]
[571]	LOAD_SPEED3	7	LOAD_SPEED4	[672]
[570]	LOAD_SPEED5	8	LOAD_SPEED6	[671]
[569]	MECHA_POS1_L	9	SAFETY_TAB	[670]
[568]	MECHA_POS2_L	10	R_C_CLK	[669]
[567]	MECHA_POS3_L	11	R_TXD	[668]
[566]	CASSET_INR_H	12	C_TXD	[667]
[565]	CASSET1_H	13	REEL_POS1_H	[666]
[564]	CASSET1_H	14	REEL_POS2_H	[665]
[563]	CASSET2_H	15	RESET	[664]
[562]	CASSET_UP_L	16	CASSET_MID_H	[663]
[561]	CASSET_DOWN_H	17	CAS_DOWN_L	[662]
	DGND	18	AGND	
[559]	SYS_SRV_DATA	19	SRV_SYS_DATA	[660]
[558]	SYS_SRV_CLK	20	POWER_OF_RQ	[659]
[557]	SOL_NG(L)	21	CLN_SOL_NG	[658]
[556]	5V(μgu)	22	5V(μgu)	[657]
	S_REEL_FWD_L	23	T_REEL_FWD_L	[656]
CL1324	FEND	24	CAP_FWD_L	[655]
[553]	FRAME_CTL	25	CAP_FG1	[654]
[552]	TSR	26	T_START	[653]
[551]	FRP	27	T_END	[652]
[550]	DEW_ON_H	28	DEW_GND	[651]
[549]	LOAD_FG_M	29	CL_SOL_ON(H)	[650]
[548]	FPS0	30	TEST(L)	[649]
[547]	S_PHOTO	31	PHT_LED(H)	[648]
[546]	S_BRK_ON(H)	32	S_BRK_OFF(H)	[647]
[545]	R_ST_SPEED1	33	R_ST_SPEED2	[646]
[544]	R_ST_SPEED3	34	R_STAND_MT_FWD	[645]
[543]	R_STAND_MT_ON_H	35	SOL_12V	[644]

SERVO6 [543-577, 644-678]

RF1
P9501
VJS2899A096P

TENSION_TP	1A
TSR	2A
ATF1	3A
T_ERR	4A
T_M_GND	5A
PB_DATA_P	6A
PB_CLK_P	7A
	8A
VTB_12M_CLK	9A
VS_DATA	10A
	11A
	12A
EVR_TEN	13A
RP_HSW	14A
	15A
AV_RF_DATA	16A
ENV_FLG	17A
REC1	18A
FE_CTRL0	19A
REC_CTRL_A	20A
CW_SEL	21A
GND	22A
HSE_P	23A
ATFCLK_P	24A
GND	25A
+12V	26A
-12V	27A
+5V	28A
-5V	29A
-5V(ECL)	30A
GND	31A
GND	32A

RF2
P9501
VJS2899A096P

ATF_ERR	1B
SPA	2B
RP_ENV	3B
PB_ENV	4B
GND	5B
PB_DATA_N	6B
PB_CLK_N	7B
GND	8B
GND	9B
VS_CLK	10B
GND	11B
GND	12B
EVR_SRL	13B
PB_HSW	14B
	15B
AV_RF_CLK	16B
GND	17B
GND	18B
GND	19B
GND	20B
GND	21B
GND	22B
HSE_N	23B
ATFCLK_N	24B
GND	25B
+12V	26B
-12V	27B
+5V	28B
-5V	29B
-5V(ECL)	30B
GND	31B
GND	32B

RF3
P9501
VJS2899A096P

LIVE_CTL	1C
S_ERR	2C
RTV_SPD_PB	3C
REFCLK	4C
GND	5C
GND	6C
GND	7C
GND	8C
FRP2	9C
VS_CS	10C
	11C
	12C
EVR_TRL	13C
FE_HSW	14C
	15C
AV_RF_HALD_H	16C
AV_RF_EQLD_H	17C
	18C
FE_CTRL1	19C
REC_CTRL_B	20C
REC_SIG_SEL	21C
GND	22C
GND	23C
GND	24C
GND	25C
+12V	26C
-12V	27C
+5V	28C
-5V	29C
-5V(ECL)	30C
GND	31C
GND	32C

SERVO_3
P9502
VJP1231T

M16V	1	UNREG
	2	UNREG
MGND	3	UNREG_GND
	4	UNREG_GND

SERVO_4
P9503
VJP1230T

	1	SOL_12V
	2	
	3	MGND

C9501
16V/2000

P_SERVO_P_SOL [1129, 1131, 1133, 1231, 1233, 1316]
P_SERVO_P_SOL [1129, 1131, 1133, 1231, 1233, 1316]
(P SERVO)

P_RF [1826-1830]   (P RF) P_RF [1826-1830]

TP_POINT [1112, 1124, 1212]

EVR [1125-1127]

VR9501
50K/R6

Ref No. 9500 Series.

CL1112 CL1124 CL1119 CL1120 CL1204 CL1206 CL1210 CL1213 CL1221 CL1212 CL1108

COMPONENT NAME	MOTHER	03/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP000E6A		

SCM069
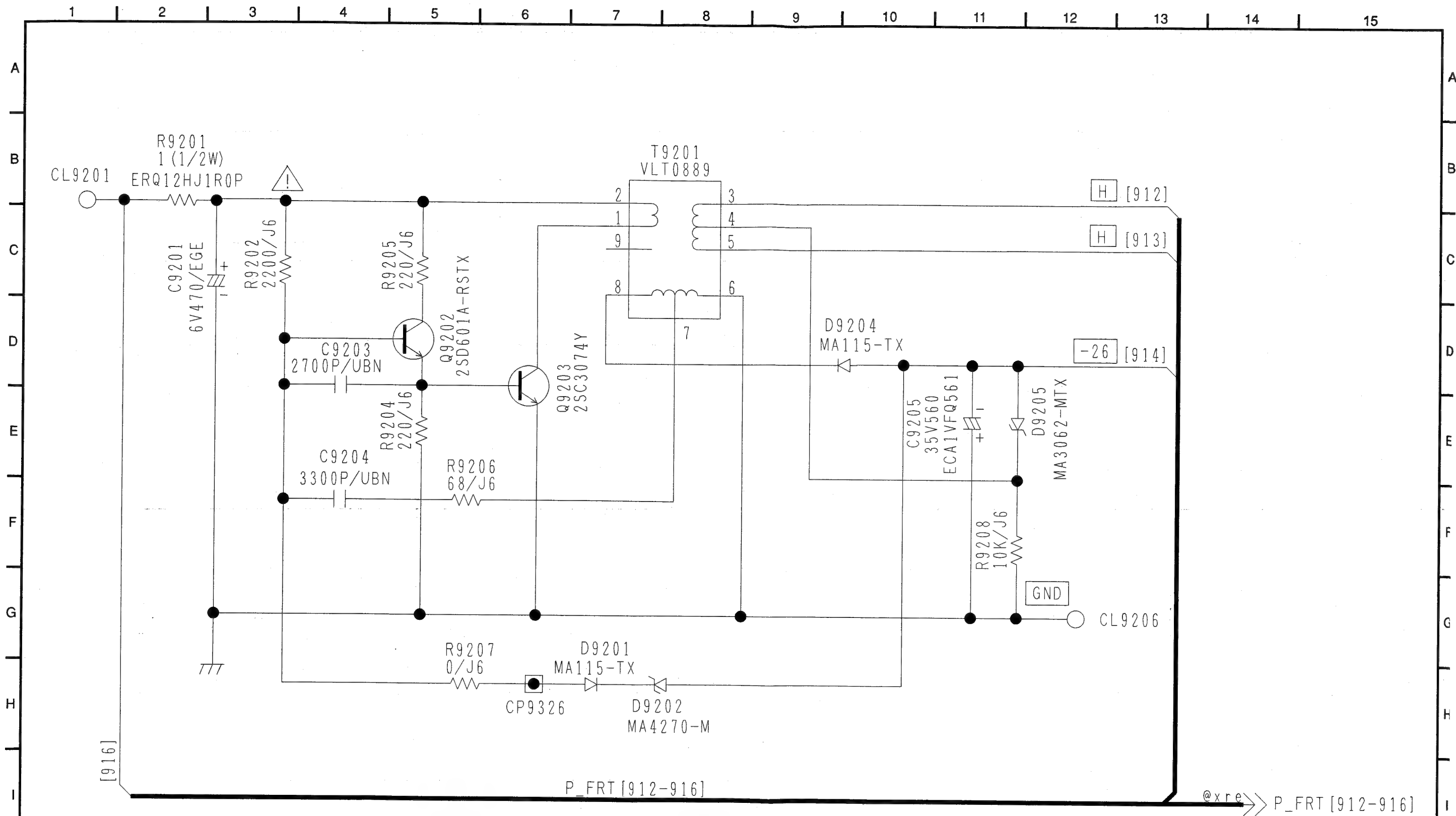
CL9201

R9201
1 (1/2W)
ERQ12HJ1R0P ⚠

C9201
6V470/EGE

R9202
2200/J6

R9205
220/J6

Q9202
2SD601A-RSTX

C9203
2700P/UBN

R9204
220/J6

Q9203
2SC3074Y

C9204
3300P/UBN

R9206
68/J6

T9201
VLT0889

2 3
1 4
9 5
8 6
7

H [912]
H [913]

D9204
MA115-TX

C9205
35V560
ECA1VFQ561

R9208
10K/J6

D9205
MA3062-MTX

-26 [914]

GND

CL9206

R9207
0/J6

CP9326

D9201
MA115-TX

D9202
MA4270-M

[916]

P_FRT [912-916]

@xre ⟫ P_FRT [912-916]

⚠ 警告

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CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE
COMPONENTS, USE ONLY THE SAME TYPE.

Ref No. 9200 Series.

COMPONENT NAME	MOTHER	04/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP000E6A		

SCM070

RE_POWER >> (1)

R5133
0/J3

Q5101
PAT/2SD601A-RTX

Q5103
2SB709A-QRTX

R5101 PAT/J3
R5105 PAT/J3
R5107 3R3/J3
C5106 180P/UV
R5111 10/J3

R5102 PAT/J3
C5101 0FV PAT
GND
GND

R5109 2200/J6
R5101

C5103 22P/UV

CPS101-TX
QR5101 UN5215-TX
GND

R5112 680P/J3

R5117 100/J8 VLQ01632R2
L5101 VLQ01632R2
C5109 3P/UV
L5103 VLQ01632R2
R5121 100/J8
R5123 680P/J3

RE L
TP5101 EYF6CU

R5127 100/J3

R5129 0/J3
(1) >> RE_L_P
(1) >> RE_L_N

R5130 0/J3

RE_L_ENABLE >> (8) RE_ON 'H', 3V-COMS

C5110 15P/UV

C5107 8P/UV

Q5105 2SC3735-T2B
Q5107 2SC3735-T2B

C5113 8P/UV

R5113 1200/J3

R5119 68/J8

R5124 1200/J3

GND

R5134
0/J3

Q5102
PAT/2SD601A-RTX

Q5104
2SB709A-QRTX

R5103 PAT/J3
R5106 PAT/J3
R5108 3R3/J3
C5106 180P/UV
R5114 10/J3

R5104 PAT/J3
C5102 0FV PAT
GND
GND

R5110 2200/J6

C5104 22P/UV

CPS102-TX
QR5102 UN5215-TX
GND

R5115 680P/J3

R5118 100/J8 VLQ01632R2
L5102 VLQ01632R2
C5111 3P/UV
L5104 VLQ01632R2
R5122 100/J8
R5125 680P/J3

RE R
TP5102 EYF6CU

R5128 100/J3

R5131 0/J3
(1) >> RE_R_P
(1) >> RE_R_N

R5132 0/J3

RE_R_ENABLE >> (8) RE_ON 'H', 3V-COMS

C5112 15P/UV

C5108 8P/UV

Q5106 2SC3735-T2B
Q5108 2SC3735-T2B

C5114 8P/UV

R5116 1200/J3

R5120 68/J8

R5126 1200/J3

GND

COMPONENT NAME	RF(RE DRIVER)	02/09
CIRCUIT BOARD NO.	MODEL NO.	
VEP05348C		

SCM072

RF(HEAD AMP)

CIRCUIT BOARD NO. VEP05348C

03/09

SCM073

RF(MOTHER)

COMPONENT NAME	RF(MOTHER)	09/09
CIRCUIT BOARD NO.	MODEL NO.	
VEP05348C		

SCM079

R1 ⚠
330K (1/2W)

C2 ⚠
0.22(250V)

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COMPONENTS, USE ONLY THE SAME TYPE.

| 4 | HOT |
| 1 | COLD |

VJP2639
P2

With VJF0867

4　3
L1
1　2

C3
PAT

⚠ ⚠

C4
PAT

⚠ C1
0.22(250V)

*

F1 *

F2 *

J1 *

P1 ⚠

1

3

2

(TO CHASSIS)

VJS2985
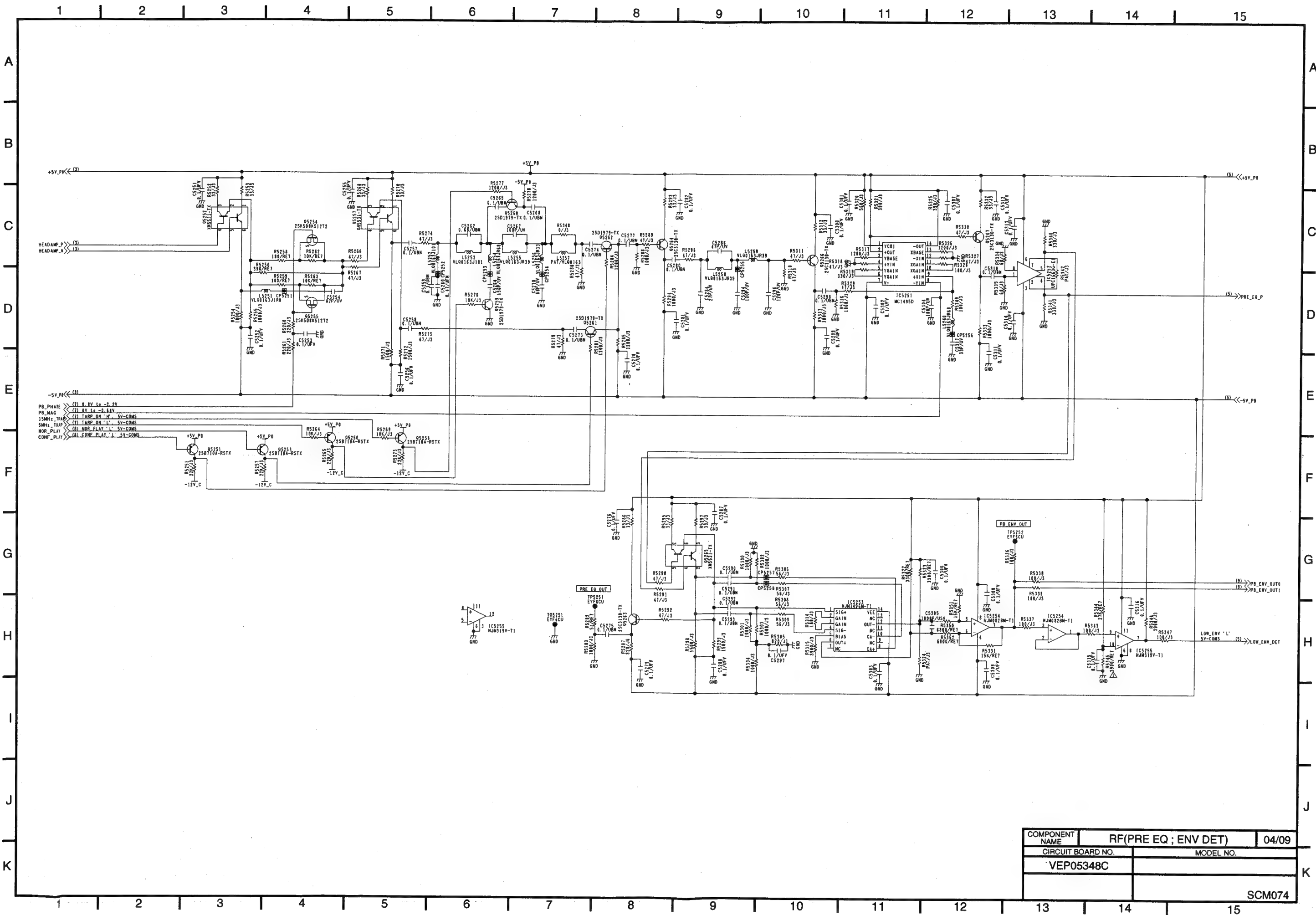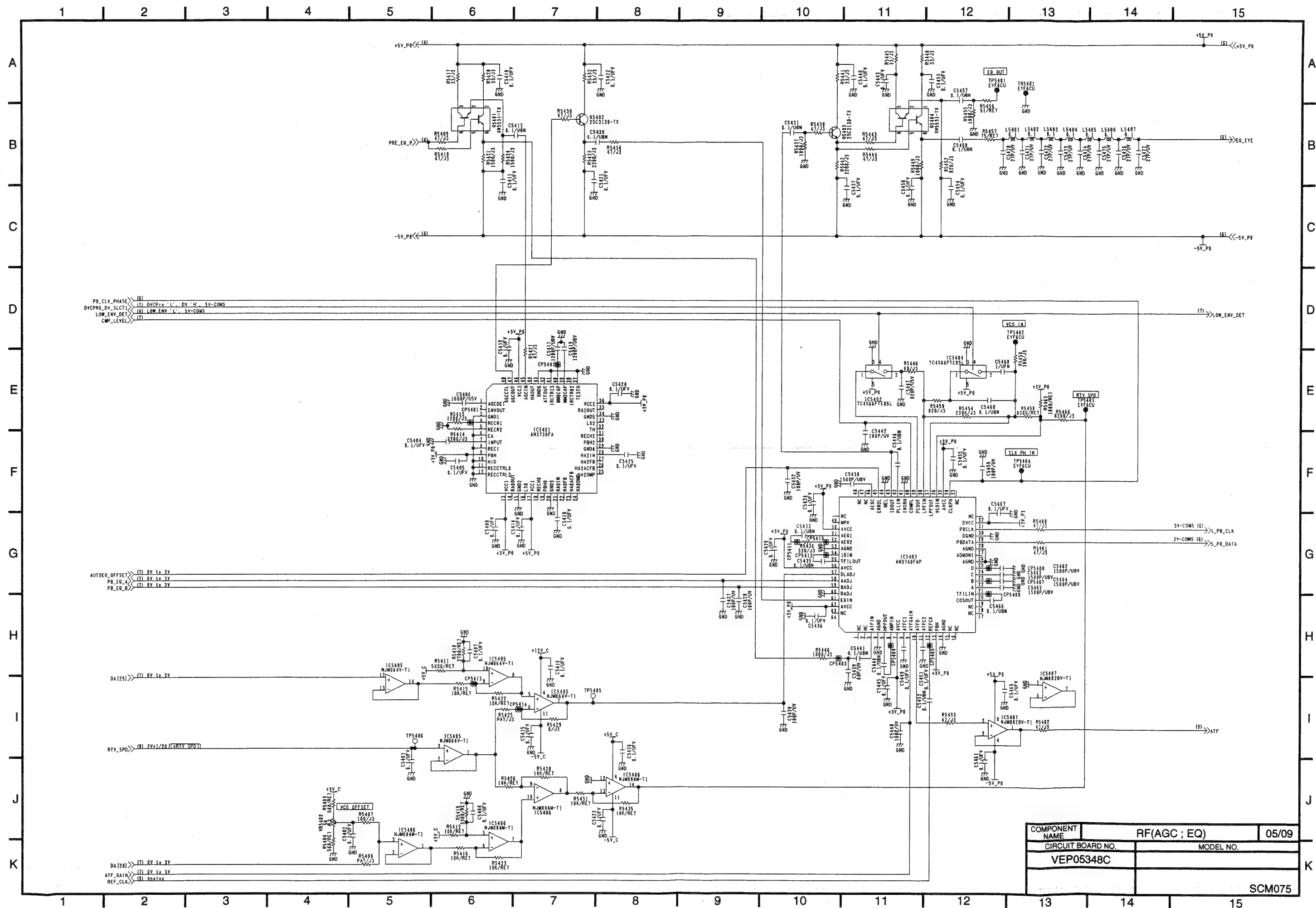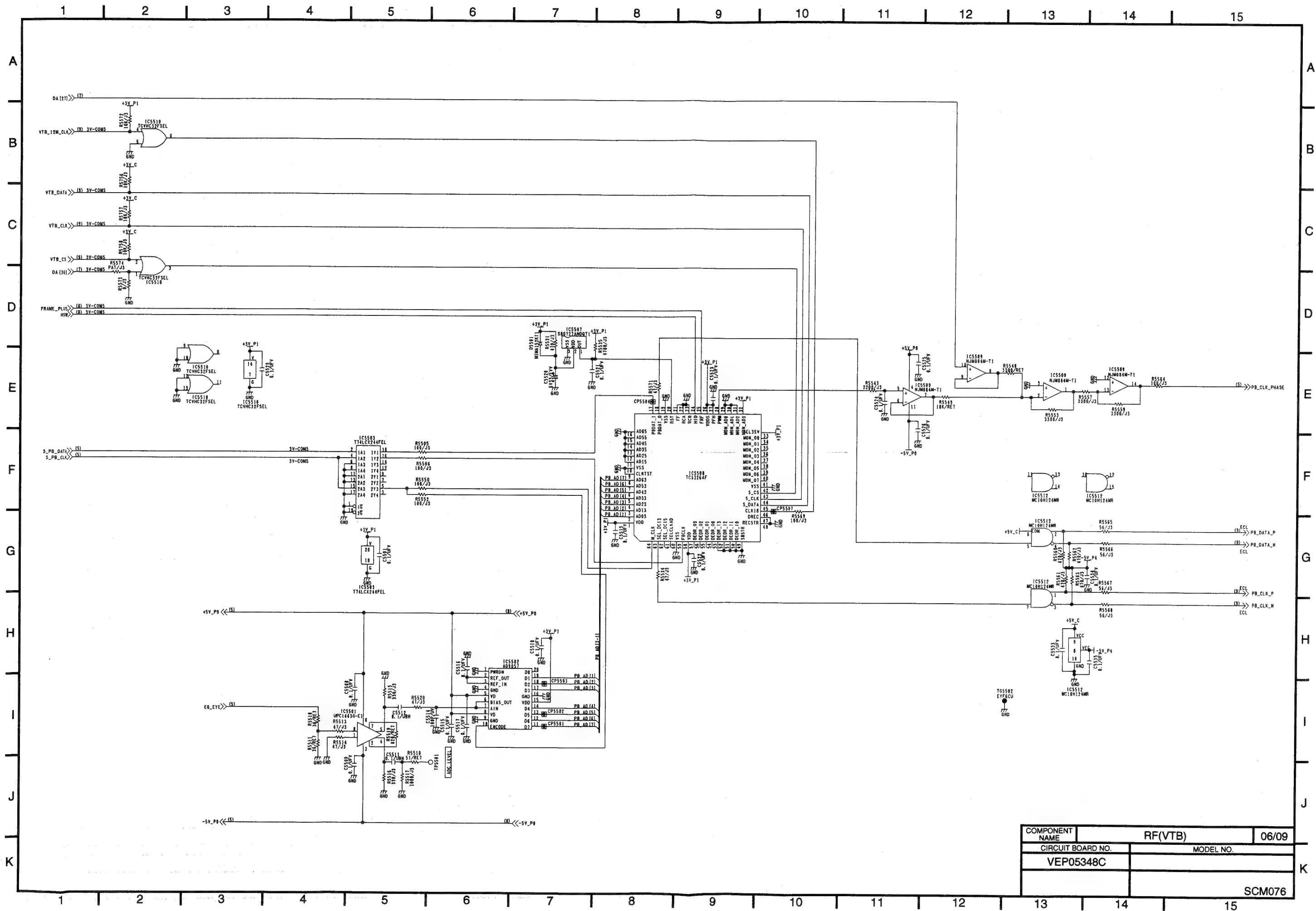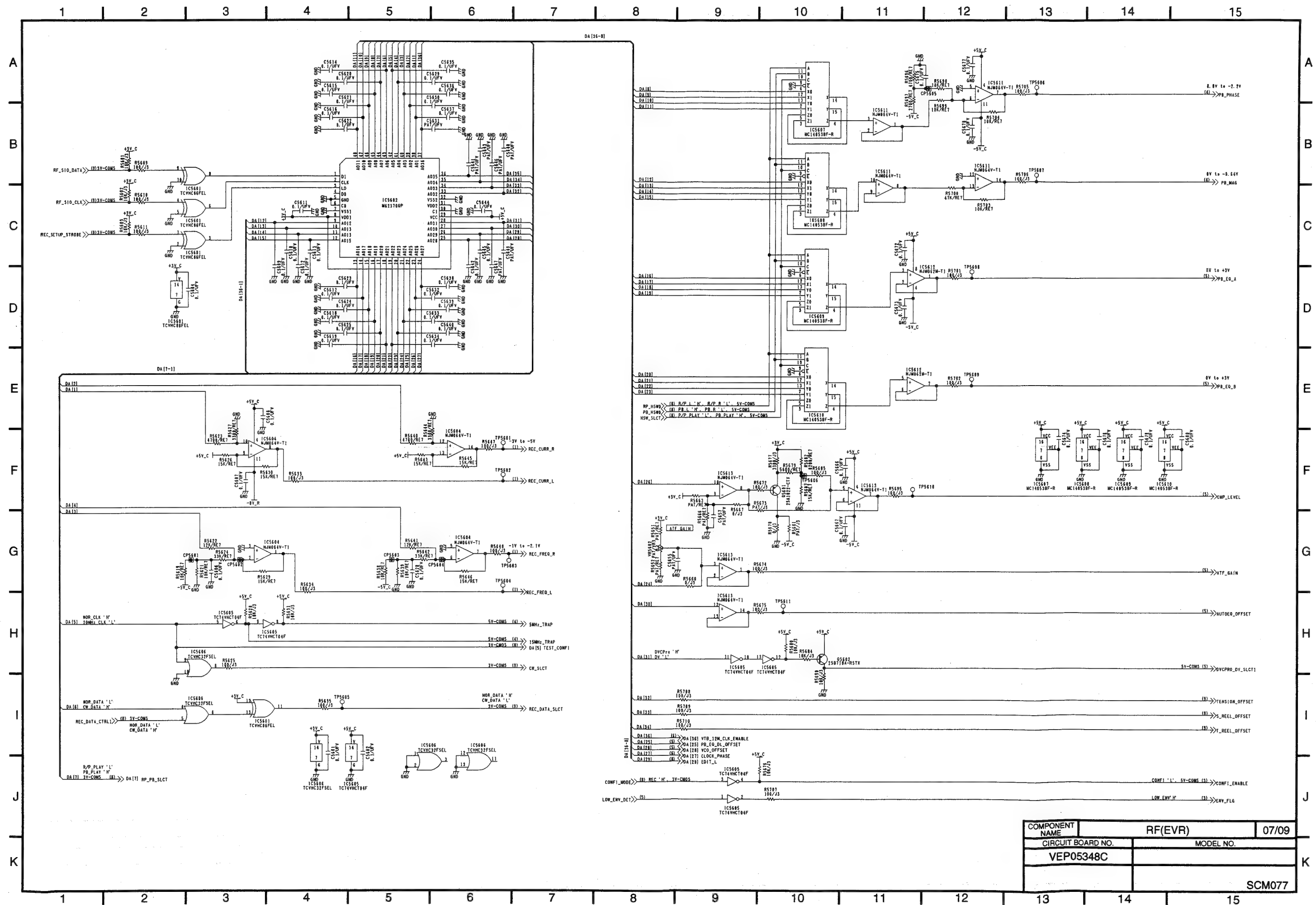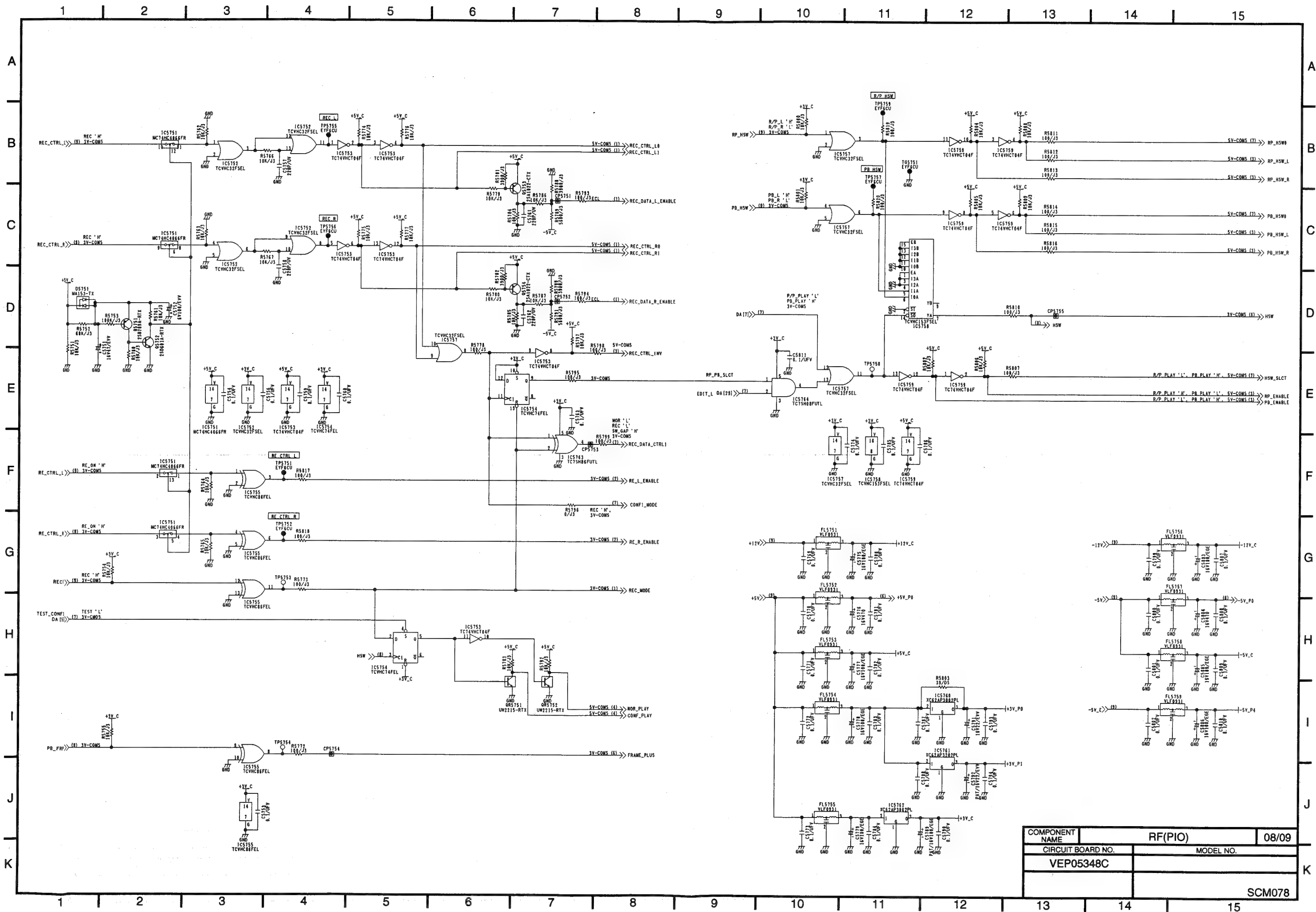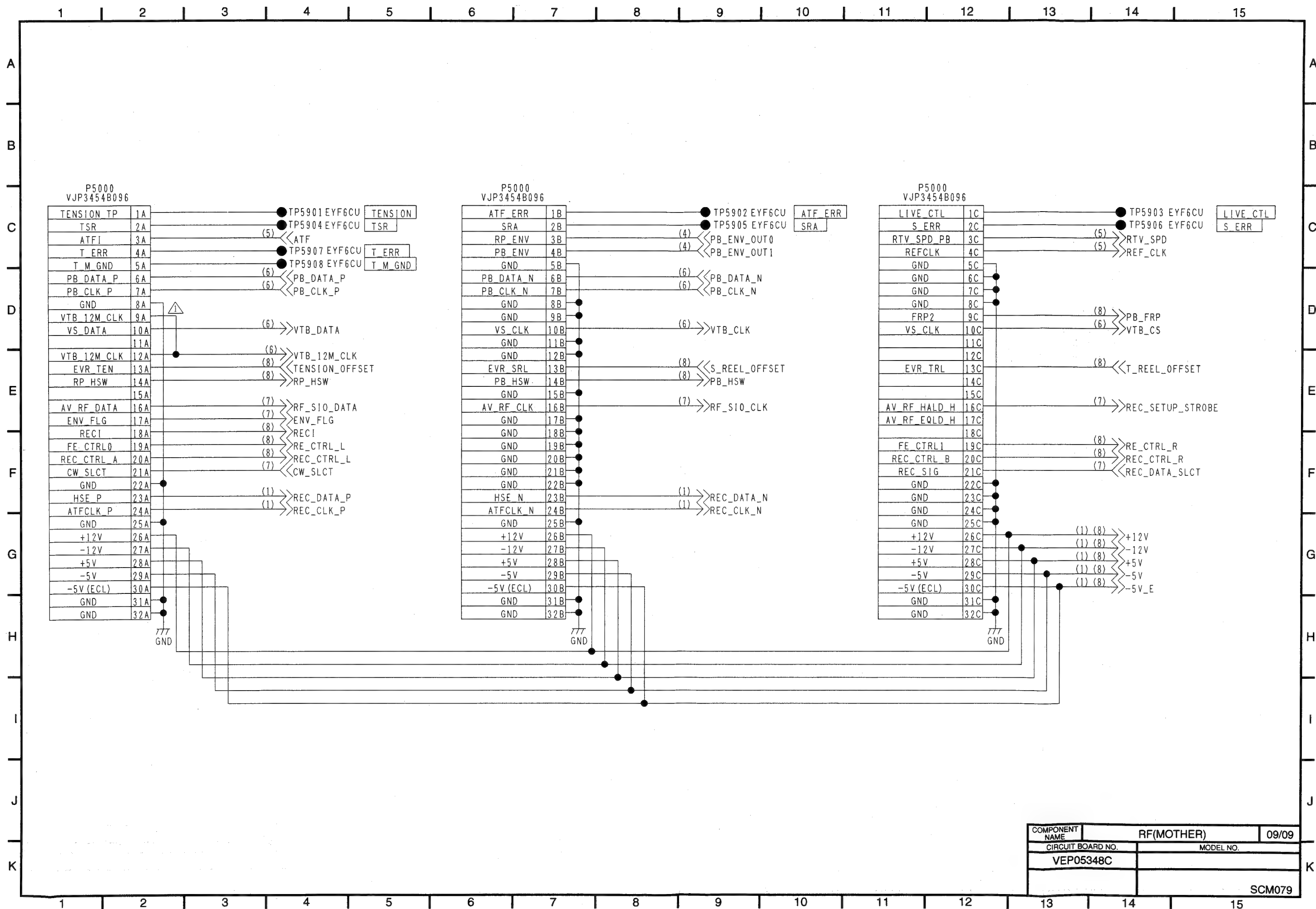
REF.NO.1100 SERIES

COMPONENT NAME	POWER 1	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP01791A		

SCM080

Ref.No	NTSC	PAL
F1101	XBA1C25NB5	XBA2C25TH15
F1102		
L1101	ELF18D602	ELF18D602
R1020	680	680
R1021	680 (2W)	680 (2W)
D1016	31DQ04FC6	31DQ04FC6
J4		
R1033	680 (2W)	680 (2W)
C1038	25V100	25V100
P1002	VJP3324	VJP3324
P1003	VJP3324	VJP3324
P1004	VJP1230T	VJP1230T
L1001	ELF18D602	ELF18D602

Ref.No	NTSC	PAL
C1007	VCK0106K151T	VCK0106K221T
D1005	MA4240-L	MA4200-H
R1009	ERDS2FJ271T	ERDS2FJ270T
R1010	ERDS2FJ271T	ERDS2FJ270T
R1011	ERW1PKR39	ERW1PKR47
C1001	VCK0260M222A	VCK0260M222A
C1002	VCK0260M222A	VCK0260M222A
C1004	VCK0260M102A	VCK0260M102A
C1026	0.1(B)	0.1(B)
D1014	MA4130-L	MA4130-L
Q1002	2SD1474	2SD1474*
HEAT SINK	VSC3434	VSC3434

HOT

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CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE
COMPONENTS, USE ONLY THE SAME TYPE.

※PAT=PATTERN ONLY

REF.NO. 1000 SERIES

COMPONENT NAME	POWER 2	01/01
CIRCUIT BOARD NO.		MODEL NO.
VEP01792A		

SCM081

| CH3 | CH4 | PAUSE | REC | PLAY | FF | REW | STOP |

+5V (1)

R65101 180/J6
R65102 180/J6
R65117 180/J6
R65103 180/J6
R65104 180/J6
R65105 180/J6
R65106 180/J6
R65107 180/J6
R65108 180/J6

D65120 LN38GCPP
D65121 LN38GCPP
D65122 LN38GCPP
D65123 LN38GCPP
D65124 LN28RCPP
D65125 LN38GCPP
D65126 LN38GCPP
D65127 LN38GCPP
D65128 LN38GCPP

Q65101 MSD601-RT1
Q65102 MSD601-RT1
Q65103 MSD601-RT1
Q65104 MSD601-RT1
Q65105 MSD601-RT1
Q65106 MSD601-RT1
Q65107 MSD601-RT1
Q65108 MSD601-RT1

R65109 3300/J6
R65110 3300/J6
R65111 3300/J6
R65112 3300/J6
R65113 3300/J6
R65114 3300/J6
R65115 3300/J6
R65116 3300/J6

FROM FRONT(1)
LED_OUT(0:7) (1)

| PAUSE | REC | PLAY | FF | REW | STOP | EJECT |

SW65101 EVQQS307K
SW65102 EVQQS307K
SW65103 EVQQS307K
SW65104 EVQQS307K
SW65105 EVQQS307K
SW65106 EVQQS307K
SW65114 EVQQS307K

D65101 MA151K-TX
D65102 MA151K-TX
D65103 MA151K-TX
D65104 MA151K-TX
D65105 MA151K-TX
D65106 MA151K-TX
D65107 MA151K-TX

FROM FRONT(1)
K_S0 (1)

AUDIO SELECT
SW65107 EVQ11409K
D65108 MA151K-TX

RESET
SW65108 EVQQS307K
D65109 MA151K-TX

COUNTER
SW65109 EVQQS307K
D65110 MA151K-TX

BGN
SW65110 EVQQS307K
D65111 MA151K-TX

END
SW65111 EVQQS307K
D65112 MA151K-TX

K_S1 (1)

INPUT_SELECT
S-VIDEO
SW65112 VSS0249
CMPST
D65116 MA151K-TX
D65117 MA151K-TX
DIGITAL

CONTROL
MENU
SW65113 VSS0249
LOCAL
D65118 MA151K-TX
D65119 MA151K-TX
REMOTE

NTSC
D65113 *

LOGO
D65114 *PAT

PLAYER
D65115 *PAT

K_S2 (1)

TO FRONT(1)
KEY_IN(0:7) (1)

REF	PAL	NTSC	REF	PAL	NTSC
C65013	ECKF1H121KB	ECKF1H121KB	R65001	*PAT/J6	*PAT/J6
C65014	ECKF1H121KB	ECKF1H121KB	R65002	*PAT/J6	*PAT/J6
D65001	*PAT	*PAT	R65003	*PAT/RE	*PAT/RE
D65113	*PAT	MA151K-TX	R65005	*PAT/J6	*PAT/J6
D65114	*PAT	*PAT	R65006	*PAT/J6	*PAT/J6
D65115	*PAT	*PAT	R65007	*PAT/RE	*PAT/RE
J65002	*PAT/J6	*PAT/J6	R65009	*PAT/J6	*PAT/J6
J65003	*PAT/J6	*PAT/J6	R65010	*PAT/J6	*PAT/J6
J65004	*PAT/J6	*PAT/J6	R65068	*PAT/J6	*PAT/J6
Q65001	*PAT	*PAT	R65077	*PAT/J6	*PAT/J6
QR65001	*PAT	*PAT	R65078	*PAT/J6	*PAT/J6
TG65001	*PAT	*PAT			

Ref No.65100 Series.

COMPONENT NAME	FRONT	02/02
CIRCUIT BOARD NO.	MODEL NO.	
VEP06B94C		

SCM083

REAR JACK

CIRCUIT BOARD NO.: VEP03F25A

SCM084

Schematic Diagram — RS-232C

IC6001 ADM202JN

Pin	Signal		Pin	Signal
1	C1+		16	VCC
2	V+		15	GND
3	C1-		14	T1OUT
4	C2+		13	R1IN
5	C2-		12	R1OUT
6	V-		11	T1IN
7	T2OUT		10	T2IN
8	R2IN		9	R2OUT

C6004 50V0R1/EKA
C6001 50V0R1/EKA
C6002 50V0R1/EKA
C6003 50V0R1/EKA
C6005 50V0R1/EKA

TXDP TP6003 VJR0098
RXDP TP6004 VJR0098
GND TG6005 VJR0098
TP6001 VJR0098
TP6002 VJR0098

TXDD
RXDD
DGND

CP6003
CP6004

R6004 VWJ0023=5
L6001 VLP0083-T
L6002 VLP0083-T
L6003 VLP0083-T

W3 VWJ0023=5
W2 VWJ0023=5
TP1 LAND
FGND
DGND

P6001 VJS2582B009

TXD	9	R6001 10/DS
DSR	8	R6002 10/DS
RXD	7	R6003 10/DS
R_0_L	6	
R_1_L	5	
OPTION	4	CP6001
OPTION	3	CP6002
GND	2	
+5V	1	+5V

DGND

P6002 VJS3407

Pin	Signal
1	FG
2	RXD (IN)
3	TXD (OUT)
4	CTS
5	RTS
6	DSR
7	GND
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	DTR
21	
22	
23	
24	
25	

P6002		
NTSC-JAPAN	NTSC-OVERSEAS	PAL
VJS3407	VJS3533	VJS3407

Ref No. 6000 Series.

COMPONENT NAME	RS-232C	01/01
CIRCUIT BOARD NO.	MODEL NO.	
T:VEP06B93A		
P:VEP06B93B		SCM085

REMOTE

J65301
VJJ0277

P65301
VJS3042B006W

1	GND
2	GND
3	REMOTE_IN
4	REMOTE_SW
5	GND
6	GND

C65301
*

	NTSC	PAL
C65301	*PAT	ECKF1H101KB

Ref No.65300 Series.

COMPONENT NAME	REMOTE	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP00Y35B		

SCM086

SECTION 7

CIRCUIT BOARD DIAGRAMS

CONTENS

IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WASPREPARED.

⚠ CAUTION

THE ☐ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

REMOTE P.C.BOARD (VEP00Y35B)

(COMPONENT SIDE)   (FOIL SIDE)
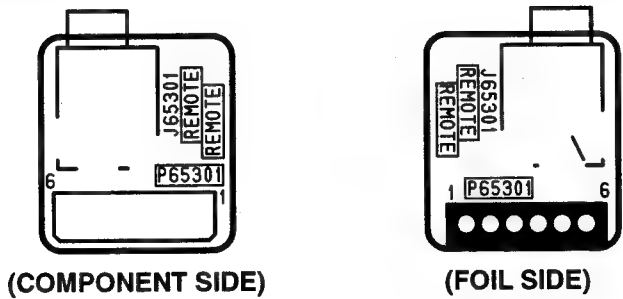
RS-232C P.C.BOARD (FOR JAPAN:VEP06B93A, FOR OVERSEAS:VEP06B93B)

(COMPONENT SIDE)

CBA-1

(FOIL SIDE)

CBA-1
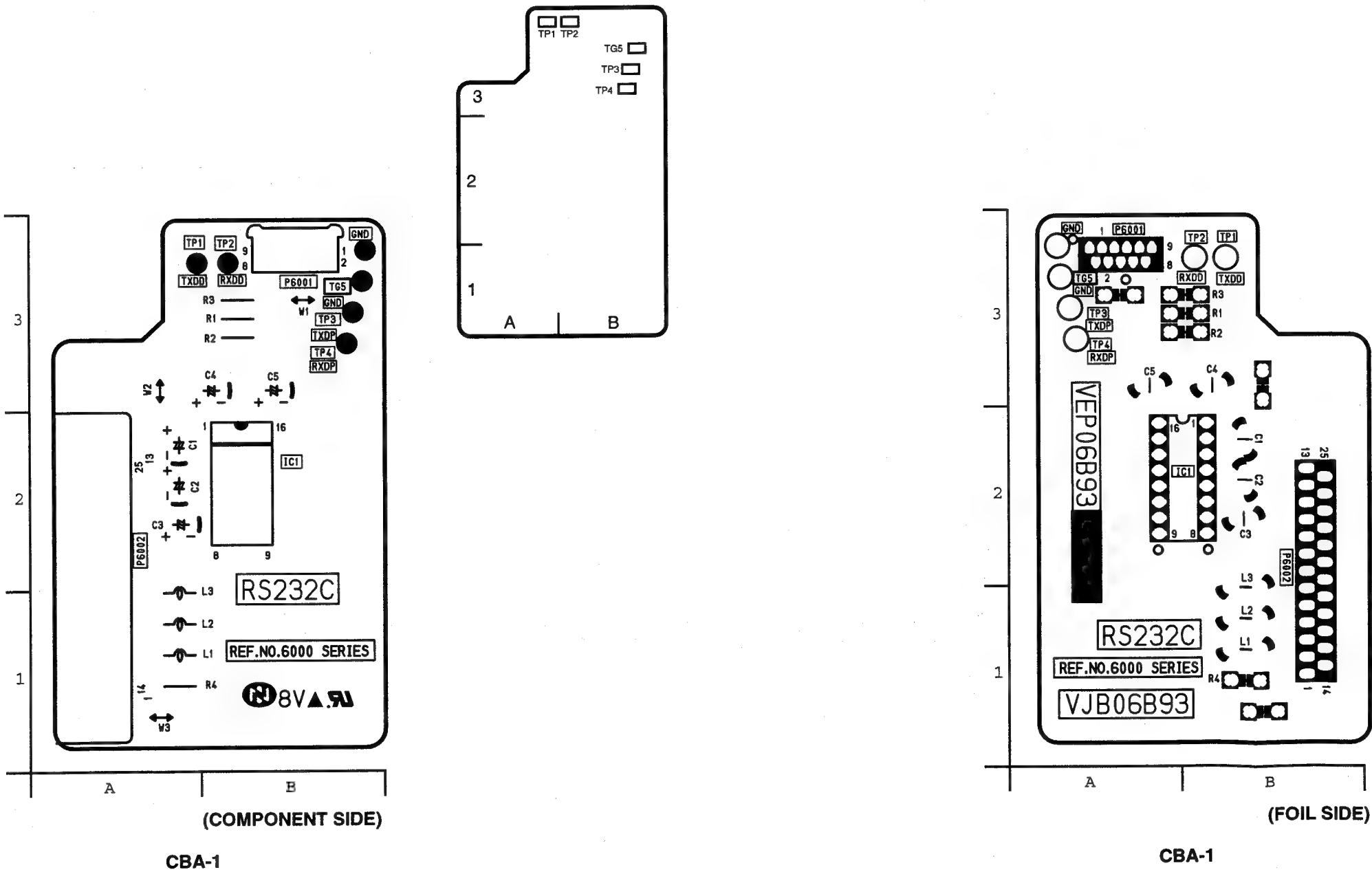
FRONT P.C.BOARD (VEP06B94C)

COMPONENT SIDE

REF	LOC
P65001	C2
P65003	G4
VR65001	B2
VR65002	B3
VR65003	A4

REF.NO.65000 SERIES

TG1

VR1

VR2

VR3

A   B   C   D   E   F   G

REF.NO.65000 SERIES

EJECT
SW114

CONTROL
MENU

LOCAL

REMOTE

SW113

INPUT SELECT
S-VIDEO

CHPST

DIGITAL

SW112

BGN   END

SW110   SW111

CH1   VR1

CH3   AUDIO
SELECT
D120

CH4
D121

SW107

CH2   VR2

HEAD PHONE

J1

VR3

23
24

P65001

D1

C1

C6

X1

C8

D127   D128   D126   DP1   D125   D122   D123   D124

REW   STOP   FF   PLAY   PAUSE   REC

SW108   SW109
RESET   COUNTER

REW   FRONT   STOP   FF   PLAY   PAUSE   REC

REF.NO.65000 SERIES

TG1

SW105   SW106   SW104   SW103   SW101   SW102

P65003

(COMPONENT SIDE)

CBA-2   CBA-2

REF	LOC	REF	LOC
IC65001	E2	Q65104	F3
IC65002	E2	Q65105	E3
Q65002	C3	Q65106	D3
Q65003	C3	Q65107	B3
Q65101	A3	Q65108	C3
Q65102	A3	QR65002	D3
Q65103	F3	QR65003	D3

VEP06B94
REF.NO.65000 SERIES
VJB06B94

FRONT

(FOIL SIDE)
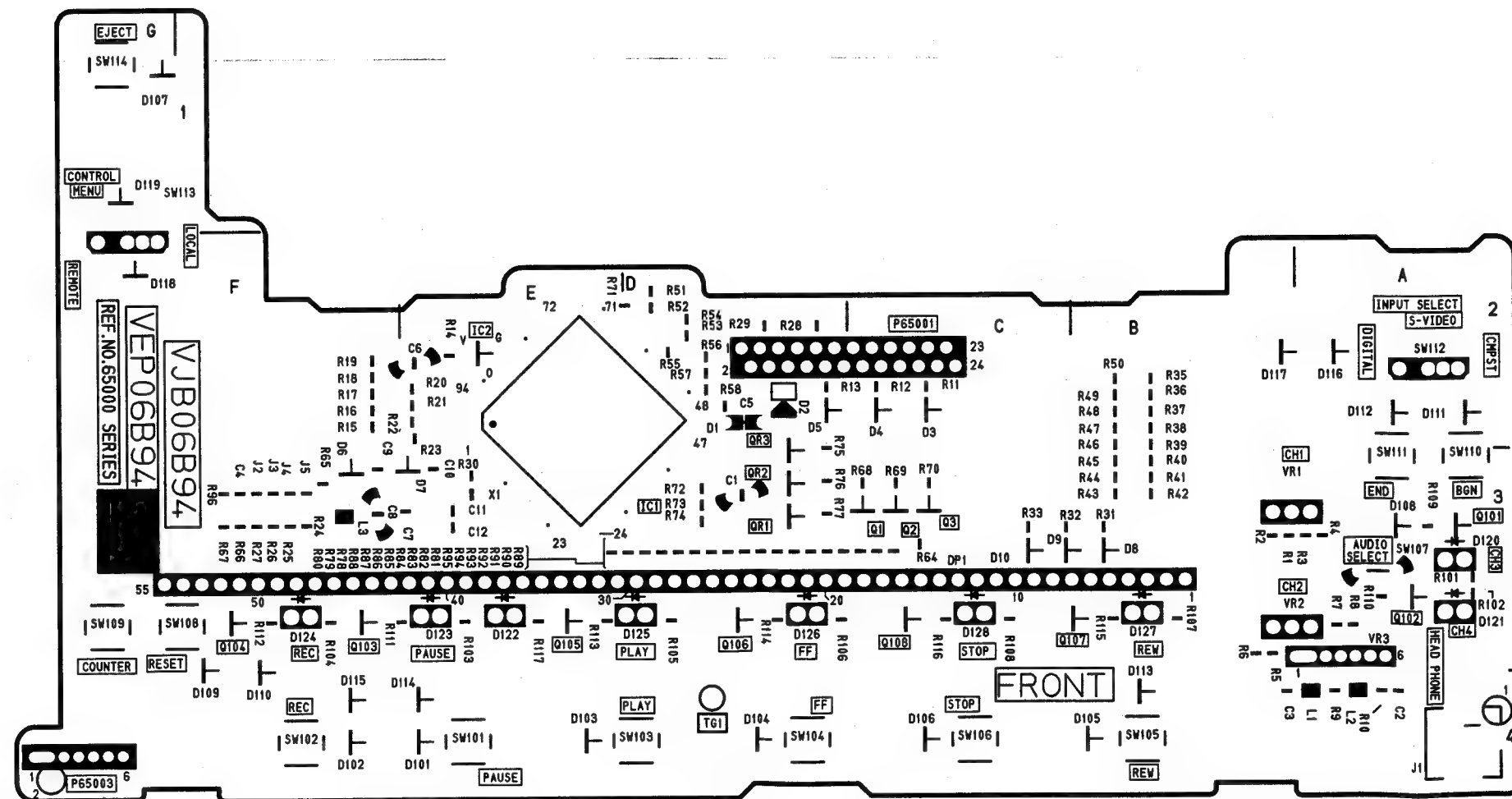
CBA-3

CBA-3

RF P.C.BOARD (VEP05348C)

REF	LOC	REF	LOC
IC5002	A3	Q5205	B1
IC5005	B4	Q5209	B1
IC5006	B3	Q5210	C1
IC5201	B2	Q5212	C1
IC5251	D1	Q5254	C1
IC5252	E1	Q5255	C1
IC5253	E1	Q5256	C1
IC5254	F1	Q5259	C1
IC5401	E1	Q5262	D1
IC5403	E2	Q5402	E1
IC5405	E3	Q5602	C2
IC5407	E3	Q5754	D2
IC5502	F3	Q5763	E2
IC5508	E3	QR5101	A1
IC5510	E3	QR5102	A1
IC5512	F3	TG5001	A4
IC5602	D2	TG5251	F1
IC5604	B2	TG5401	F1
IC5606	D2	TG5502	F4
IC5607	C2	TG5751	A1
IC5608	D2	TP5001	A4
IC5609	D2	TP5002	A4
IC5610	D2	TP5003	A4
IC5611	C2	TP5004	A2
IC5613	E1	TP5101	A1
IC5752	D3	TP5102	A1
IC5757	C3	TP5251	E1
IC5759	D2	TP5252	F1
IC5763	C3	TP5401	F1
IC5768	C3	TP5402	E2
P5000	C3	TP5404	F2
P5001	B1	TP5751	C3
P5201	B1	TP5755	C3
Q5002	A2	TP5757	A1
Q5004	A2	TP5759	B1
Q5005	A2	TP5766	C3
Q5006	A3	TP5901	F2
Q5007	A3	TP5902	F2
Q5018	A3	TP5903	F2
Q5019	A2	TP5904	F1
Q5024	A2	TP5905	F2
Q5030	A3	TP5906	F2
Q5031	A3	TP5907	F1
Q5203	C1	TP5908	F1

REF. NO. 5000 SERIES

(COMPONENT SIDE)

REF.NO.5000 SERIES RF

(FOIL SIDE)

CBA-5

AUDIO P.C.BOARD (VEP04737A)

COMPONENT SIDE

REF	LOC	REF	LOC
IC40010	A2	Q40003	B3
IC40011	B2	Q40306	B3
IC40016	A2	QR40302	C3
IC40017	A2	TG40001	A3
IC40021	B3	TG40208	B2
IC40022	B2	TG40701	C2
IC40023	B3	TP40003	B2
IC40024	B2	TP40004	A2
IC40202	C2	TP40005	A2
IC40301	B4	TP40006	A3
IC40309	A4	TP40007	A3
IC40310	A4	TP40206	C3
IC40311	A3	TP40207	C3
IC40502	D3	TP40210	C2
IC40505	E4	TP40301	A3
IC40506	E4	TP40302	A3
IC40507	D2	TP40601	B1
IC40509	D2	TP40603	C1
IC40510	D1	TP40701	C2
IC40701	C2	TP40702	B2
IC40702	B2	TP42102	E1
IC42001	E2	TP42103	E1
IC42002	E2*	TP42104	E1
IC42003	E2	TP42301	E3
IC42004	E3	TP42302	E3
IC42005	E3	VR40003	A3
IC42009	E3	VR40004	A3
IC42101	E1	VR40201	C3
IC42104	D2	VR40202	C3
IC42401	D3	VR40301	B3
IC42402	E3	VR40302	B3
IC42403	E3	VR40303	C1
IC42404	E3	VR40304	C1
IC42405	E3	VR40601	A1
P41001	C4	VR40602	C1
P41002	A1	VR40701	B1
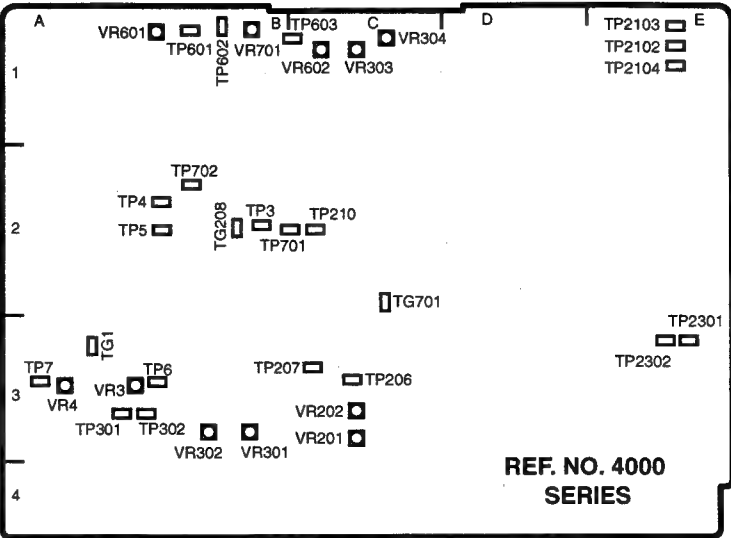
FOIL SIDE

REF	LOC	REF	LOC	REF	LOC
IC40002	C2	Q40202	C3	IC42105	D2
IC40005	C1	Q40301	A3	IC42301	D2
IC40006	C1	Q40302	A3	IC42302	D2
IC40018	A3	Q40304	B3	IC42303	E2
IC40019	A3	Q40305	B4	IC42304	D2
IC40020	A3	Q40307	A4	Q40004	A3
IC40025	A3	Q40308	A4	Q40201	C3
IC40201	B3	Q40309	A4	QR40606	B1
IC40203	C2	Q40310	A4	QR40701	C1
IC40204	C3	Q40311	B4	QR40702	C1
IC40205	C3	Q40604	A1	QR40703	B2
IC40210	C4	Q40605	A1	QR40704	B2
IC40211	C4	Q40606	A1		
IC40302	A3	Q40607	C1		
IC40303	B4	Q40608	A1		
IC40304	A3	Q40609	A1		
IC40305	A3	Q40610	A2		
IC40306	B3	Q40611	A2		
IC40307	D4	Q40612	A2		
IC40308	C4	Q40613	B1		
IC40312	A4	Q40614	C1		
IC40504	E4	Q40615	C2		
IC40508	D3	QR40005	B3		
IC40512	D3	QR40006	B3		
IC40601	A1	QR40007	A3		
IC40703	B1	QR40008	B3		
IC40704	B2	QR40201	C2		
IC40705	B2	QR40202	C3		
IC40706	C2	QR40203	C3		
IC40707	C2	QR40204	C3		
IC41001	C4	QR40205	C3		
IC41002	C4	QR40301	B4		
IC42006	E2	QR40304	B4		
IC42007	D3	QR40602	A1		
IC42008	C3	QR40603	B1		
IC42102	E1	QR40604	B1		
IC42103	D1	QR40605	A2		

REF. NO. 4000 SERIES

(COMPONENT SIDE)

CBA-6

(FOIL SIDE)

CBA-6
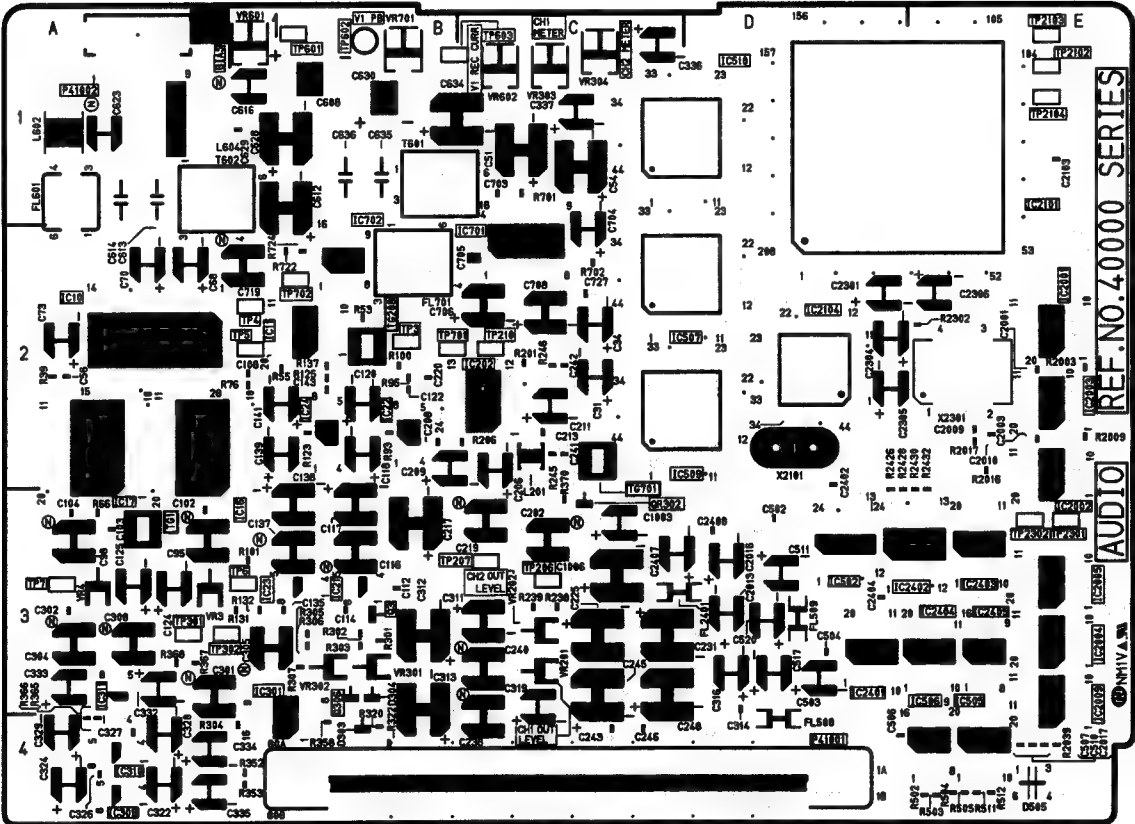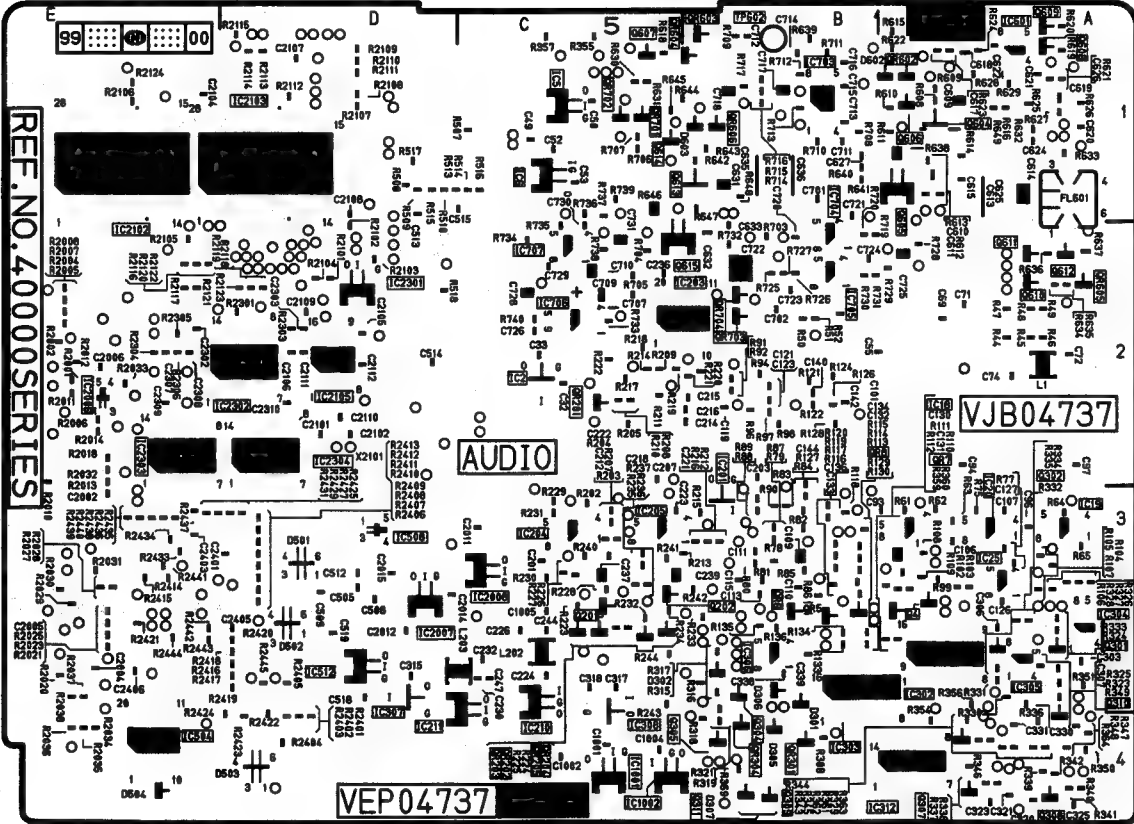
AV SYS P.C.BOARD (VEP06D02A)

COMPONENT SIDE

REF	LOC	REF	LOC
IC60001	A2	IC60901	D1
IC60002	A3	IC60902	E1
IC60003	A2	IC60903	D2
IC60004	B2	IC60904	D3
IC60005	A2	IC60905	D2
IC60006	B2	IC60906	D2
IC60007	A1	IC60907	D1
IC60008	A1	IC60908	E1
IC60009	B1	IC60909	E1
IC60010	A1	IC61001	E3
IC60011	A1	IC61002	E2
IC60013	A1	IC61003	D3
IC60101	B1	IC61101	D1
IC60102	C2	P60601	C4
IC60103	C2	P60801	C1
IC60201	A3	P60804	D1
IC60204	A4	P61101	E1
IC60206	B3	P61102	B1
IC60301	D3	QR60407	A4
IC60302	E3	QR60408	A4
IC60303	D4	QR60409	A4
IC60304	D4	QR60410	A4
IC60306	E4	QR60417	C3
IC60308	E3	QR60418	A4
IC60401	A4	QR60419	A4
IC60402	C3	QR60420	A4
IC60403	B3	QR60421	A4
IC60404	C3	TG60001	A1
IC60501	D3	TP60001	A1
IC60502	B2	TP60002	A1
IC60503	B3	VR60001	A1
IC60504	C3	VR60002	A1
IC60505	C2		
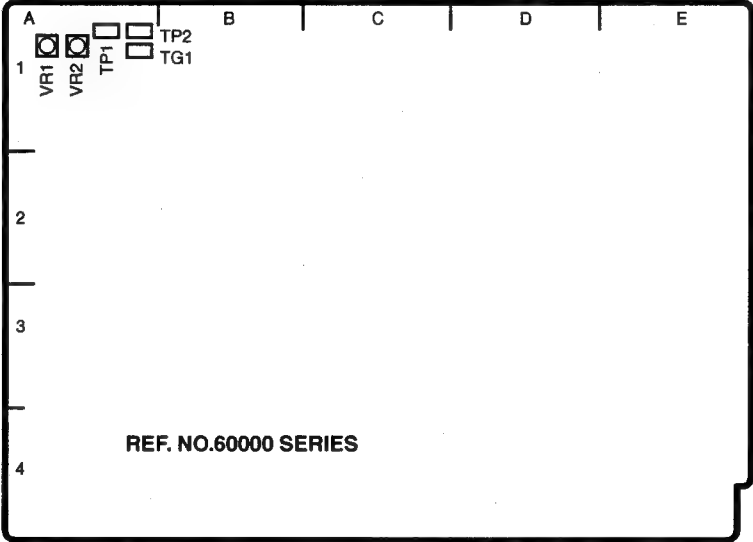
FOIL SIDE

REF	LOC	REF	LOC
IC60202	A4	QR60412	A4
IC60203	B4	QR60413	A4
IC60405	B4	QR60414	A3
P60802	A1	QR60415	A4
QR60001	A2	QR60416	A3
QR60201	A3	TG60901	D1
QR60401	A4	TP60003	A1
QR60402	A4	TP60901	D1
QR60403	A4	TP60902	D1
QR60404	A4	TP60903	D1
QR60405	A4	TP61101	B1
QR60406	A4	TP61102	B1
QR60411	A4		

REF. NO.60000 SERIES

(COMPONENT SIDE)

CBA-7

(FOIL SIDE)

CBA-7
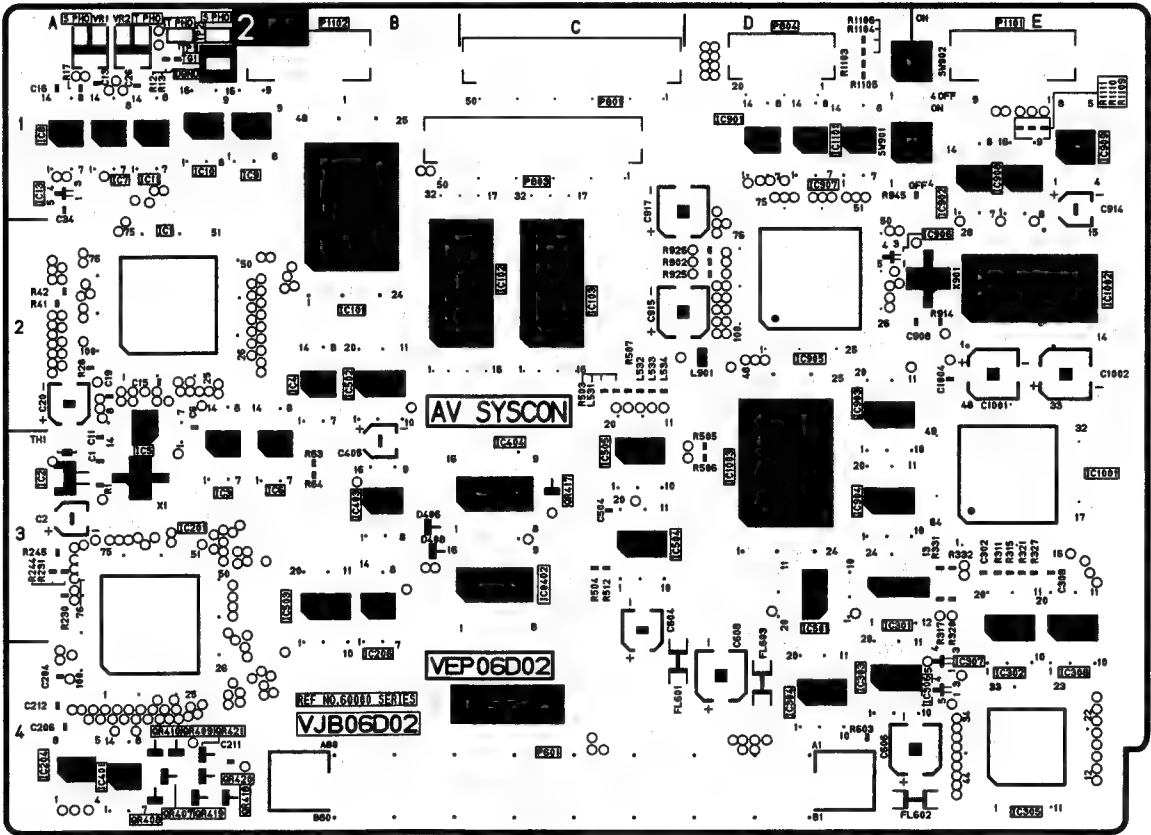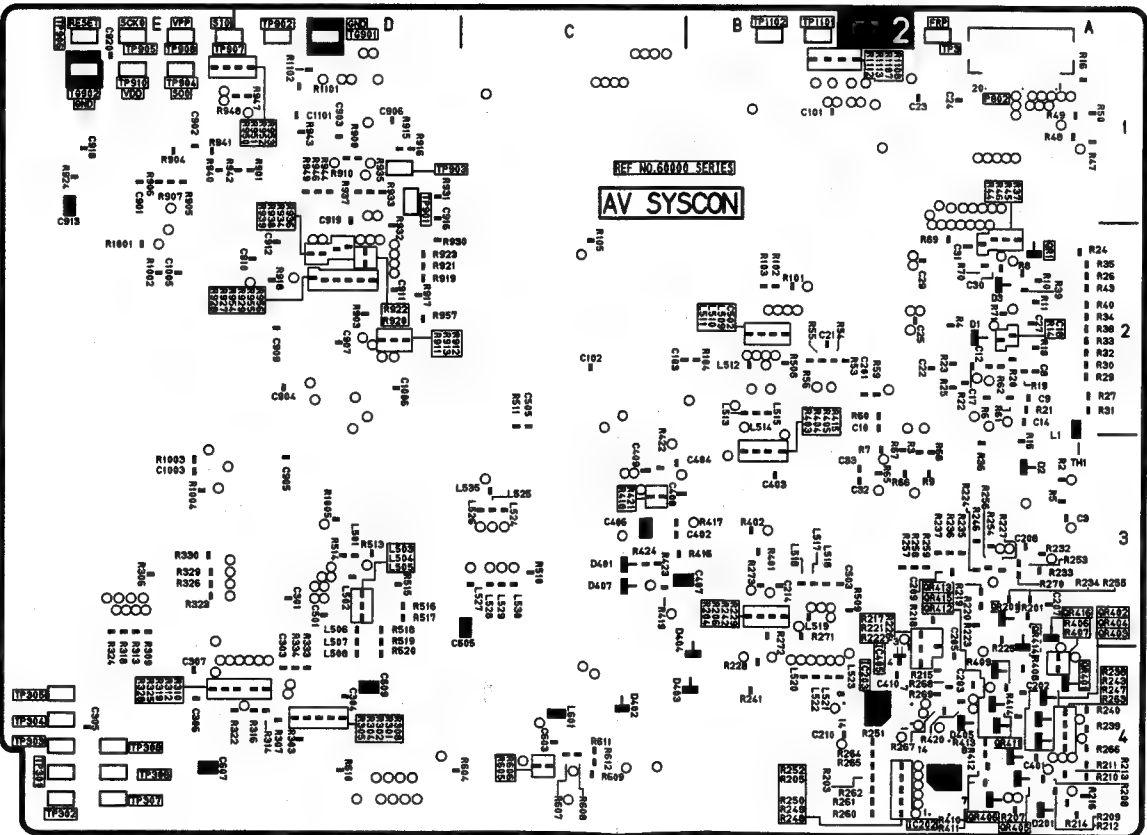
VIDEO I/O P.C.BOARD (VEP03F01A)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC30204	E1	IC31103	E4	TP30501	A3	VR30806	D3
IC30205	E2	IC31104	E4	TP30502	A3	VR30901	C3
IC30206	E2	IC31106	E4	TP30503	B3	VR30903	C2
IC30209	D2	IC31201	A4	TP30601	B1	VR30904	C2
IC30302	C2	IC31202	A4	TP30602	B1	VR30906	C2
IC30304	B2	IC31203	C4	TP30603	B1	VR30907	C2
IC30404	A2	IC31204	B4	TP30604	B1	VR30908	D2
IC30405	A2	P30101	C4	TP30605	B1	VR30910	D2
IC30503	A2	Q30303	B2	TP30606	B1	VR31001	C3
IC30505	B2	Q30304	B2	TP30607	B1	VR31002	C3
IC30507	A3	Q30305	B2	TP30701	A1	VR31101	D4
IC30508	A3	Q30401	A2	TP30801	D4	VR31102	E3
IC30509	B3	Q30402	A2	TP30802	D2		
IC30510	B4	Q30501	B3	TP30901	D2		
IC30511	A4	Q30601	C1	TP31001	C1		
IC30512	A4	Q30802	D4	TP31101	E3		
IC30605	D1	Q30804	D3	VR30401	D3		
IC30609	C1	Q30806	D3	VR30402	A2		
IC30611	C1	Q30809	D2	VR30501	B3		
IC30612	B1	Q30811	D2	VR30502	A3		
IC30701	A1	Q30813	D2	VR30503	A3		
IC30802	D2	Q30901	C4	VR30504	A3		
IC30803	D3	Q30902	C4	VR30505	A3		
IC30807	D3	Q30909	D2	VR30506	B3		
IC30809	D3	Q30911	D2	VR30507	A3		
IC30810	D2	Q31003	B3	VR30508	A3		
IC30811	D3	Q31004	B3	VR30509	B3		
IC30812	D3	Q31006	B3	VR30601	D1		
IC30813	D2	Q31012	C2	VR30602	C1		
IC30901	C3	Q31015	B2	VR30603	C1		
IC30902	C3	Q31101	E4	VR30604	B1		
IC30903	C4	Q31102	E4	VR30801	D3		
IC30905	C2	Q31104	E4	VR30802	C4		
IC31001	C3	Q31106	E4	VR30803	C4		
IC31002	B3	TP30201	D1	VR30804	D3		
IC31102	E3	TP30401	B2	VR30805	D2		
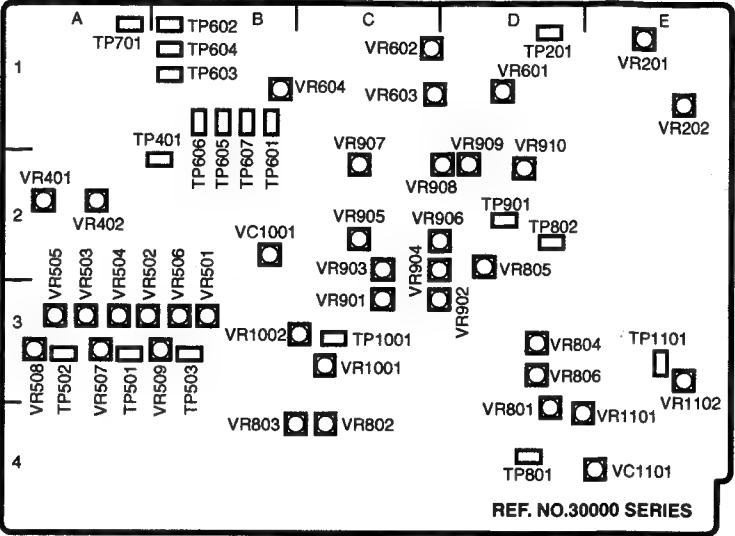
FOIL SIDE

REF	LOC	REF	LOC	REF	LOC
IC30201	E3	Q30209	E1	Q30205	E2
IC30202	E2	Q30306	B2	Q30206	E1
IC30203	E3	Q30307	B2	Q30207	E1
IC30207	D2	Q30308	B2	Q30208	E1
IC30208	E3	Q30309	B2	QR30501	B3
IC30305	B2	Q30403	A2	QR30502	A3
IC30307	B2	Q30404	A2	QR30503	A3
IC30401	A1	Q30405	A2		
IC30501	A3	Q30406	A2		
IC30502	B3	Q30602	B1		
IC30504	A3	Q30801	D4		
IC30506	A3	Q30803	D3		
IC30601	D1	Q30805	D4		
IC30602	D1	Q30807	D3		
IC30604	D1	Q30808	D3		
IC30606	B1	Q30810	D3		
IC30607	B1	Q30812	D3		
IC30608	B1	Q30814	D3		
IC30610	C1	Q30815	D2		
IC30702	A1	Q30816	D2		
IC30703	A1	Q30903	A1		
IC30801	D4	Q30904	C3		
IC30804	D3	Q30905	C3		
IC30805	D3	Q30906	C3		
IC30806	D2	Q30907	C3		
IC30808	B4	Q30908	C3		
IC30904	C3	Q30912	D2		
IC31003	C3	Q30914	D2		
IC31004	C2	Q31001	B3		
IC31005	B2	Q31002	C2		
IC31101	E3	Q31005	B3		
IC31105	E4	Q31007	C3		
Q30201	E2	Q31008	C2		
Q30202	E2	Q31009	C3		
Q30203	E2	Q31103	E4		
Q30204	E2	Q31105	E4		

REF. NO.30000 SERIES

VEP03F01 / VJB03F01 / VIDEO I/O

(COMPONENT SIDE)

REF.NO.30000 SERIES / VIDEO I/O
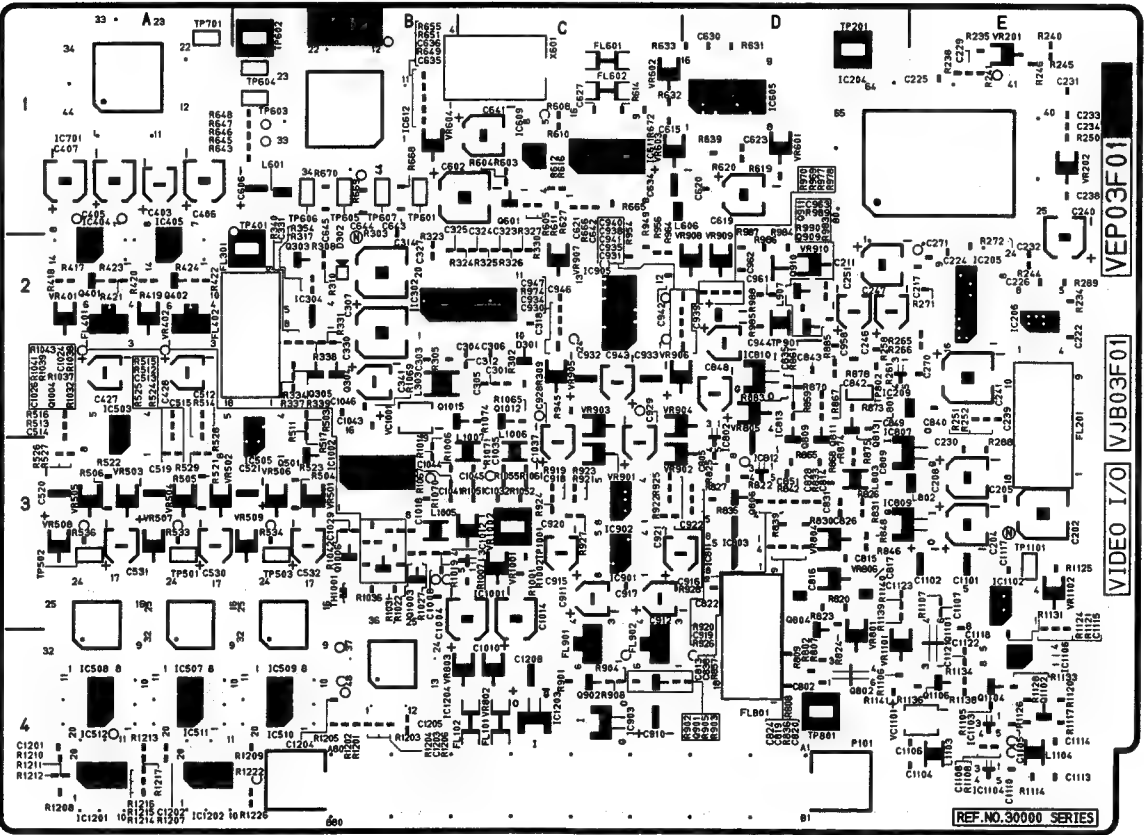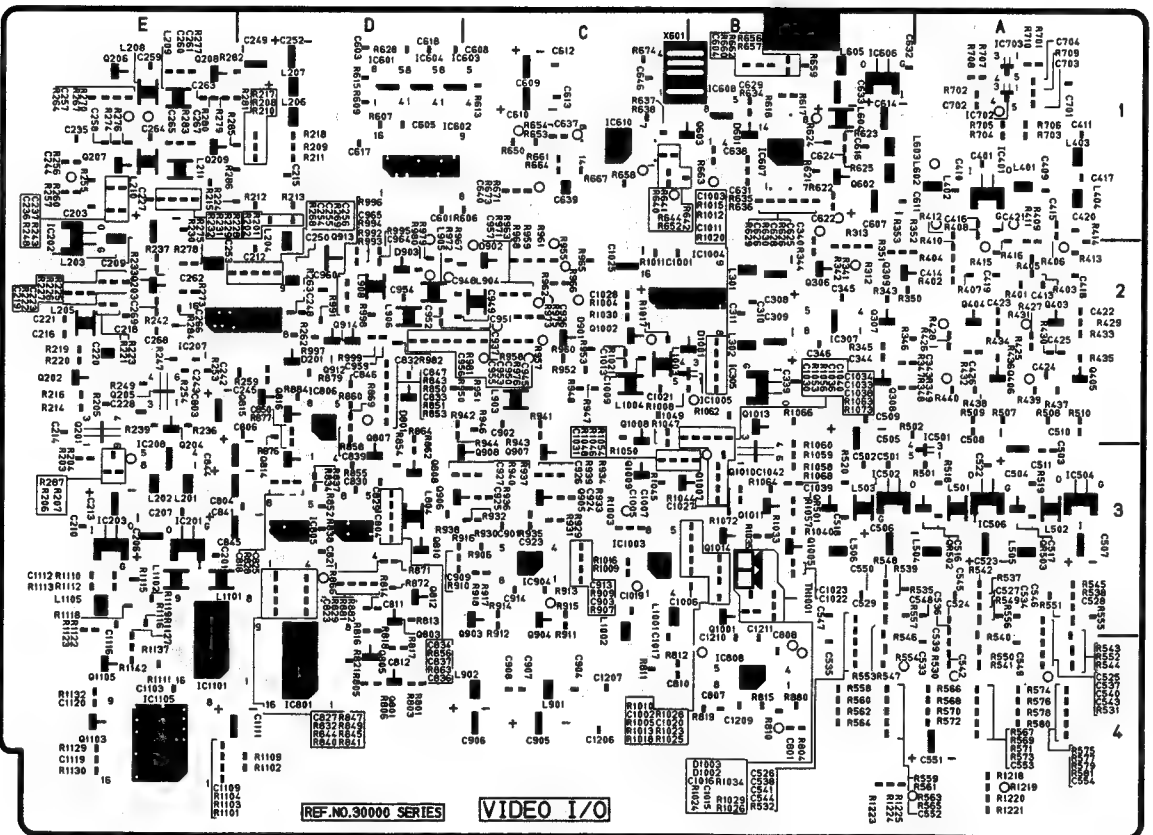
(FOIL SIDE)

TBC P.C.BOARD (VEP03E32B)

REF	LOC	REF	LOC
IC3012	B3	Q3002	B2
IC3101	A4	Q3003	B2
IC3102	A4	Q3004	B2
IC3103	A4	Q3201	A2
IC3104	A3	Q3501	D1
IC3107	B3	Q3503	D1
IC3108	A3	TG3003	B2
IC3204	B1	TG3201	A2
IC3209	B2	TG3401	C3
IC3210	B1	TG3501	C2
IC3215	A2	TG3502	D1
IC3216	A1	TP3001	B2
IC3217	A2	TP3002	B3
IC3307	E3	TP3004	B3
IC3312	E3	TP3201	B2
IC3313	E3	TP3202	B1
IC3314	D2	TP3203	A1
IC3315	D3	TP3501	D2
IC3402	C3	TP3502	C2
IC3406	D3	TP3503	D1
IC3407	C3	TP3504	D1
IC3505	C2	TP3505	D1
IC3513	D2	TP3506	D1
IC3526	D1	TP3507	E1
IC3527	C1	VR3001	B2
IC3529	E2	VR3501	C1
P3902	B1	VR3504	D1
P3981	C4	VR3507	D1
Q3001	B2	VR3508	C2

REF. NO. 3000 SERIES
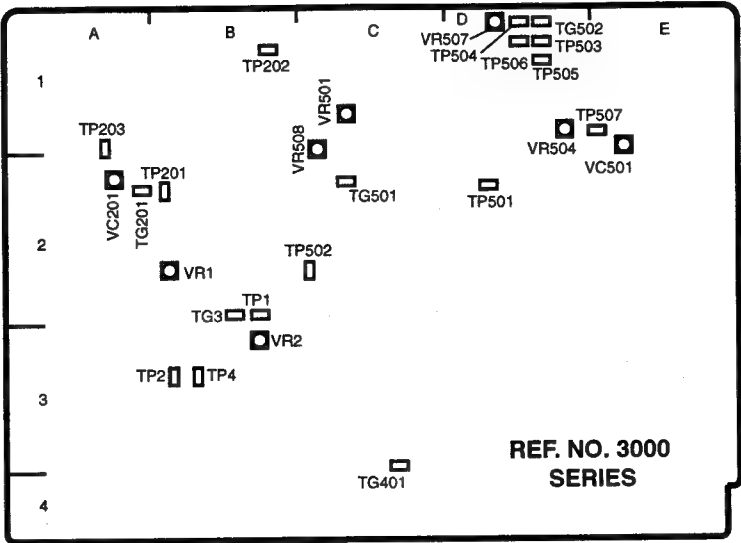
REF	LOC	REF	LOC
IC3001	A2	IC3310	E3
IC3002	C3	IC3311	E3
IC3003	A2	IC3401	C3
IC3004	B3	IC3403	D3
IC3005	B2	IC3404	D3
IC3006	B2	IC3405	C3
IC3007	B2	IC3501	D2
IC3008	B2	IC3502	D2
IC3009	B2	IC3503	E2
IC3010	B3	IC3504	B1
IC3011	B3	IC3506	C2
IC3013	B3	IC3507	C1
IC3014	B2	IC3508	C1
IC3105	A2	IC3509	C2
IC3106	A3	IC3510	E2
IC3109	B3	IC3511	E2
IC3110	A3	IC3512	D1
IC3201	A1	IC3514	D2
IC3202	B1	IC3515	E1
IC3203	B1	IC3516	E1
IC3205	B2	IC3517	E1
IC3206	B2	IC3518	E1
IC3207	B1	IC3519	C1
IC3208	B1	IC3520	C1
IC3211	A2	IC3521	D1
IC3212	A1	IC3522	D1
IC3213	A1	IC3523	D1
IC3214	A2	IC3524	D1
IC3301	E3	IC3525	D1
IC3302	E3	IC3528	C2
IC3303	E3	Q3401	C3
IC3304	E3	Q3402	D4
IC3305	D3	Q3403	C4
IC3306	E3	Q3404	D4
IC3308	D4	Q3502	E1
IC3309	D4	Q3504	C2

(COMPONENT SIDE)

CBA-9

(FOIL SIDE)

CBA-9
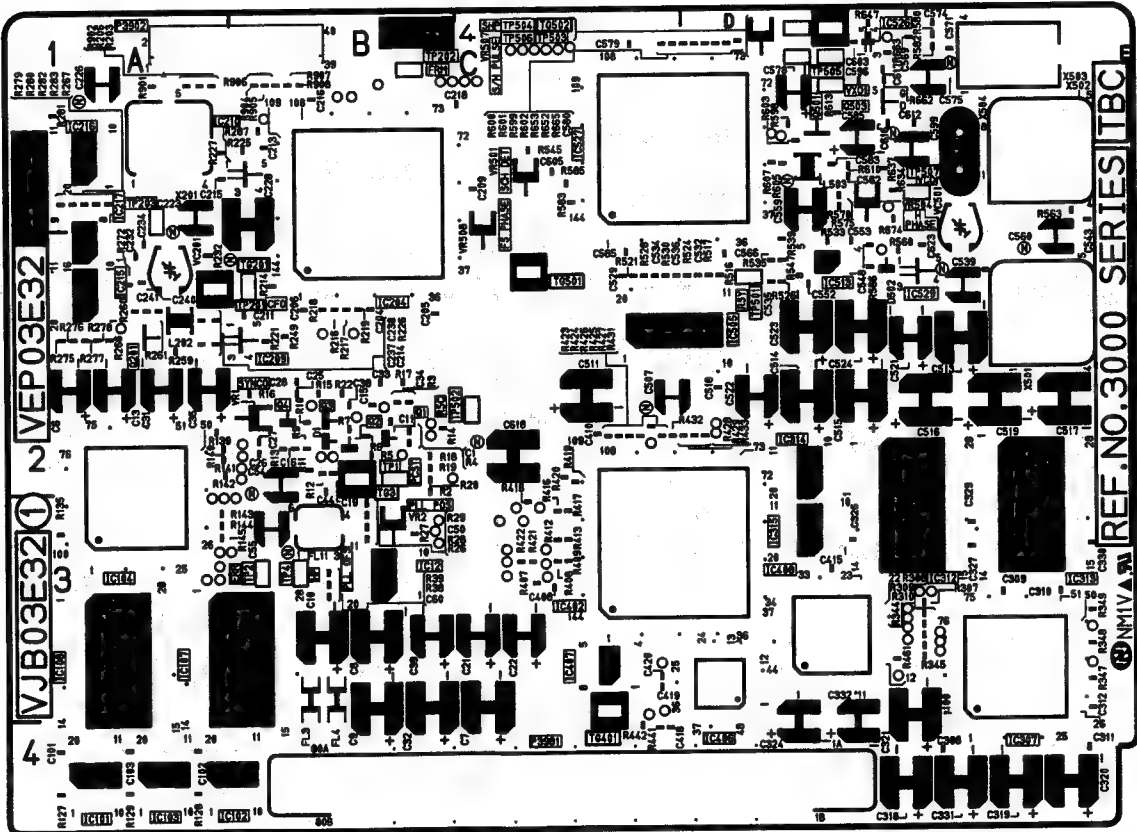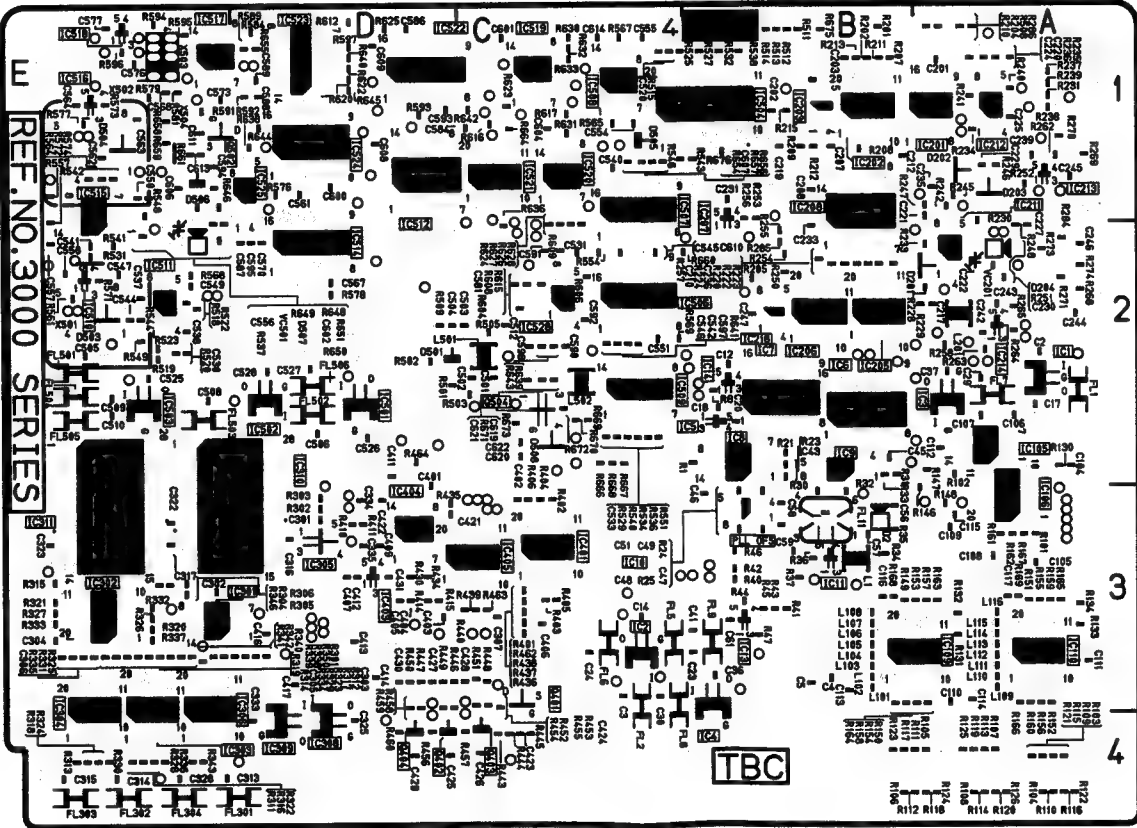
DIGITAL CORE P.C.BOARD (VEP03F00A)

COMPONENT SIDE

REF	LOC	REF	LOC
IC3001	C3	TG3302	B2
IC3002	D3	TP3002	C3
IC3101	D1	TP3003	C3
IC3102	D2	TP3004	C3
IC3107	E1	TP3103	E2
IC3204	B2	TP3104	E1
IC3205	B2	TP3201	C1
IC3304	A3	TP3202	B1
IC3401	C2	TP3301	A2
IC3417	C1	TP3304	A1
IC3420	C1	TP3305	C2
IC3421	D2	TP3306	C4
IC3501	E4	TP3307	C4
IC3502	E4	TP3601	C1
IC3503	E3	TP3602	B1
IC3504	E3	TP3603	B1
IC3507	E2	TP3604	B1
IC3508	E3	TP3801	A2
IC3513	E2	TP3802	A2
IC3603	A1	TP3901	D3
IC3801	A2	TP3951	C2
P3981	C4	VR3101	E1
P3982	B1	VR3102	E1
TG3001	C1	VR3103	E1
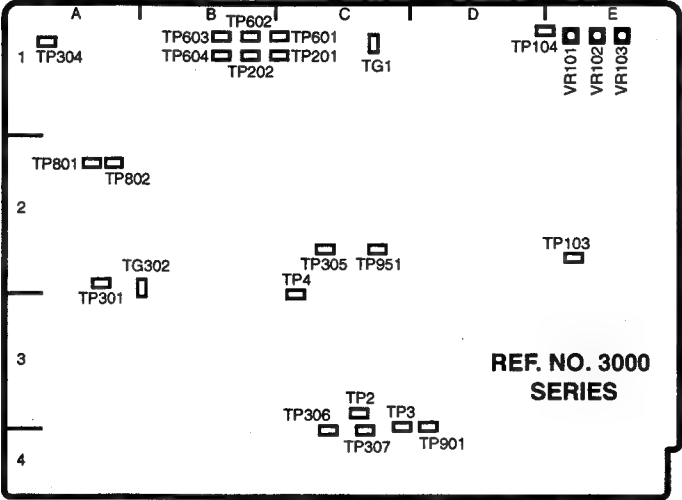
FOIL SIDE

REF	LOC	REF	LOC
IC3003	D3	IC3419	C1
IC3007	C2	IC3422	B1
IC3008	D3	IC3505	E2
IC3103	D1	IC3509	E3
IC3104	D1	IC3510	E3
IC3105	D2	IC3511	E3
IC3106	D2	IC3512	E2
IC3108	D1	IC3601	A2
IC3110	D1	IC3602	A2
IC3111	D2	IC3605	A2
IC3112	D2	IC3606	B1
IC3202	B1	IC3704	B3
IC3203	C1	IC3705	C3
IC3206	B1	IC3713	B3
IC3207	B1	IC3714	C3
IC3208	B1	IC3718	C3
IC3301	B3	IC3719	C3
IC3302	A3	IC3802	A2
IC3305	B3	IC3901	D3
IC3306	B3	IC3902	D3
IC3308	B3	IC3905	D3
IC3310	A4	IC3906	D3
IC3311	A3	IC3907	D3
IC3315	B3	IC3908	E3
IC3316	B3	IC3951	B2
IC3317	A3	IC3952	B2
IC3403	C1	IC3953	B2
IC3404	C1	IC3954	B2
IC3405	C2	Q3601	A1
IC3415	C1	QR3601	A1
IC3416	C2		

REF. NO. 3000 SERIES
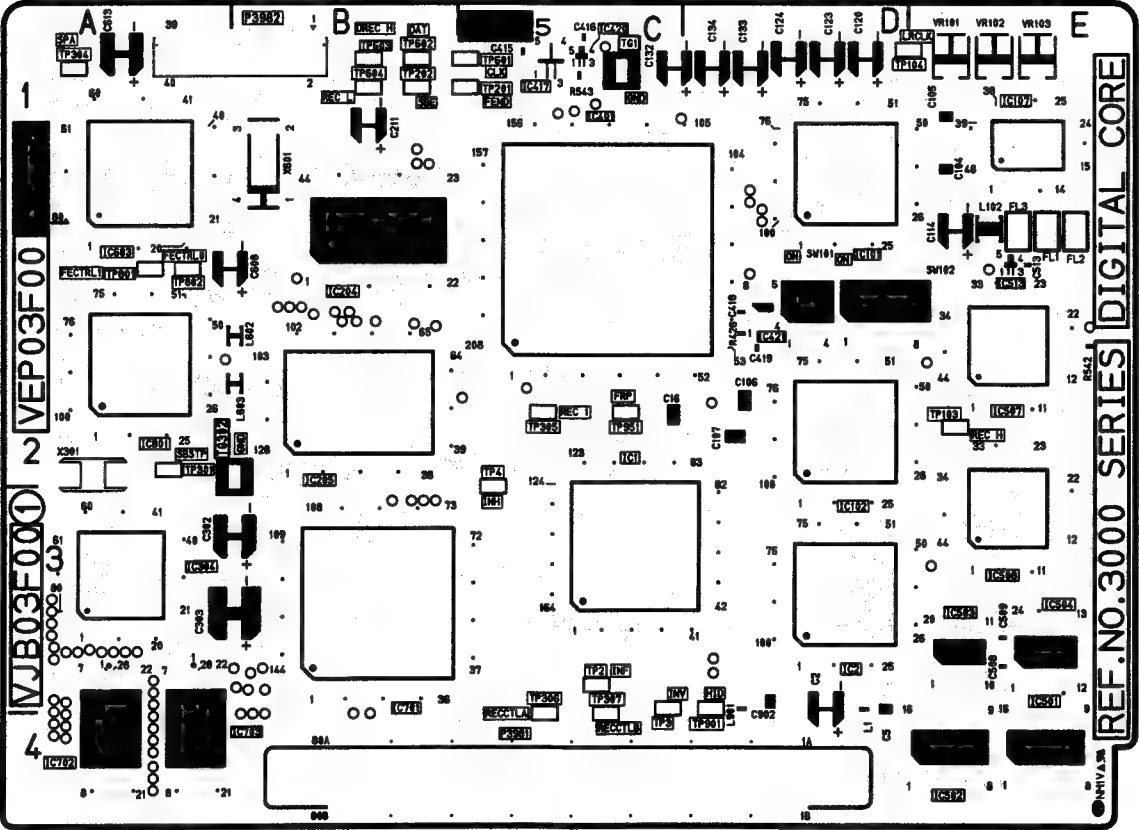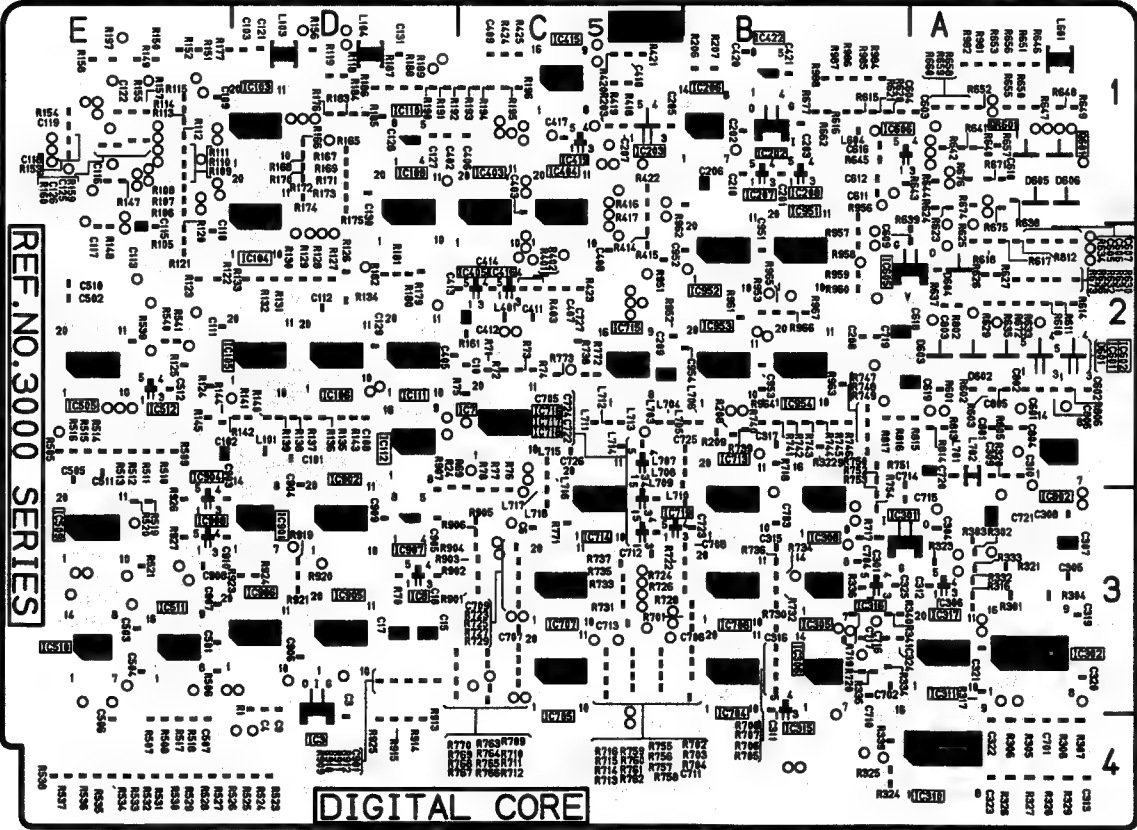
(COMPONENT SIDE)

(FOIL SIDE)

SERVO P.C.BOARD (VEP02545J)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC
IC2101	C2	P2025	B2	TP2453	D2
IC2201	B3	P2026	C2	TP2454	C1
IC2305	C3	P2030	B5	TP2701	A3
IC2401	B1	P2032	A4	TP2702	A3
IC2405	D1	P2033	C4	TP2704	B4
IC2407	C1	P2034	B1	TP2801	B2
IC2502	C2	P2035	D1	TP2903	A4
IC2601	D2	P2036	D4	TP2906	B1
IC2602	C3	P2037	A5	TPG2201	C1
IC2901	B1	P2038	C1	VR2901	B1
IC2902	B1	Q2501	C3	VR2902	B1
IC2904	D1	Q2502	D3		
IC2905	D2	Q2504	C2		
IC64201	B2	Q2505	C2		
IC64202	A2	Q2507	D4		
P2001	A4	Q2508	D4		
P2002	B1	Q2509	C2		
P2003	D4	Q2701	B4		
P2004	A3	Q2708	B5		
P2011	B5	Q64203	A4		
P2012	B1	QR2501	C2		
P2013	A3	QR2502	C2		
P2014	A3	QR64013	A2		
P2015	A3	QR64201	C2		
P2016	A2	QR64202	C2		
P2017	C1	TP2201	B4		
P2018	E3	TP2205	A4		
P2019	E2	TP2301	C3		
P2020	E4	TP2305	B3		
P2021	E4	TP2401	B1		
P2022	D5	TP2403	B1		
P2023	A5	TP2404	E2		
P2024	E3	TP2451	C1		
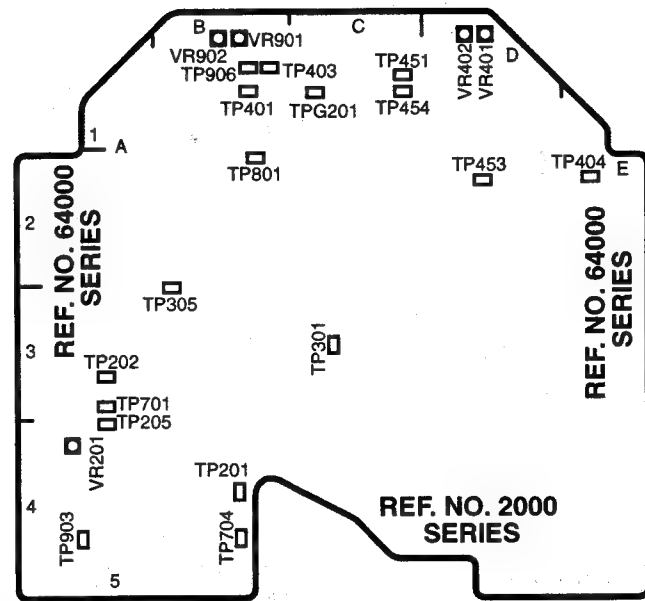
FOIL SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC2102	C3	P2025	B2	Q64014	E3	QR64003	D3
IC2103	B2	P2026	C2	Q64015	A2	QR64004	D3
IC2104	C3	Q2506	C3	Q64016	E2	QR64005	A1
IC2105	C3	Q2510	C4	Q64017	E2	QR64006	A1
IC2106	C3	Q2511	D4	Q64018	E2	QR64007	A1
IC2202	B3	Q2512	D4	Q64019	E3	QR64008	D2
IC2203	A3	Q2513	C4	Q64020	A2	QR64009	E2
IC2205	B3	Q2514	C4	Q64021	D3	QR64010	D2
IC2206	A3	Q2515	C4	Q64022	E4	QR64011	E3
IC2207	B3	Q2516	C4	Q64023	E4	QR64012	E3
IC2209	B3	Q2517	C4	Q64024	D2	QR64014	E3
IC2210	B3	Q2518	C4	Q64026	D2	QR64016	E4
IC2211	B3	Q2601	D2	Q64027	A3	QR64203	C1
IC2301	D3	Q2602	D3	Q64028	D3	QR64205	C1
IC2302	D3	Q2702	B4	Q64029	E4	QR64208	C1
IC2303	C3	Q2703	A4	Q64030	E4	QR64209	A2
IC2304	C3	Q2704	A4	Q64031	D2	QR64210	A2
IC2306	A3	Q2705	A5	Q64032	E4	QR64211	B2
IC2404	C2	Q2706	A4	Q64033	E4	QR64212	A3
IC2406	C3	Q2707	A5	Q64034	E4	QR64213	A3
IC2503	D4	Q2901	A4	Q64035	B1	QR64214	A3
IC2701	B4	Q64001	D4	Q64202	A4	TP2203	A3
IC2702	B4	Q64002	C3	QR2015	D2	TP2204	A3
IC2703	B4	Q64003	E3	QR2207	D1	TP2302	A3
IC2704	B4	Q64004	D3	QR2264	D1	TP2303	A4
IC2705	A4	Q64005	D3	QR2401	B2	TP2304	A3
IC2801	B1	Q64006	D3	QR2402	B2	TP2702	B4
IC2907	A4	Q64008	E3	QR2450	D2	TP2703	B4
IC2908	C3	Q64009	A2	QR2451	D2		
IC64201	B2	Q64010	D3	QR2703	B4		
IC64202	A2	Q64011	A2	QR2704	B4		
P2003	D4	Q64012	E2	QR64001	D3		
P2004	A3	Q64013	A2	QR64002	D3		

REF. NO. 64000 SERIES

REF. NO. 2000 SERIES

SERVO

(COMPONENT SIDE)

CBA–11

(FOIL SIDE)

CBA–11
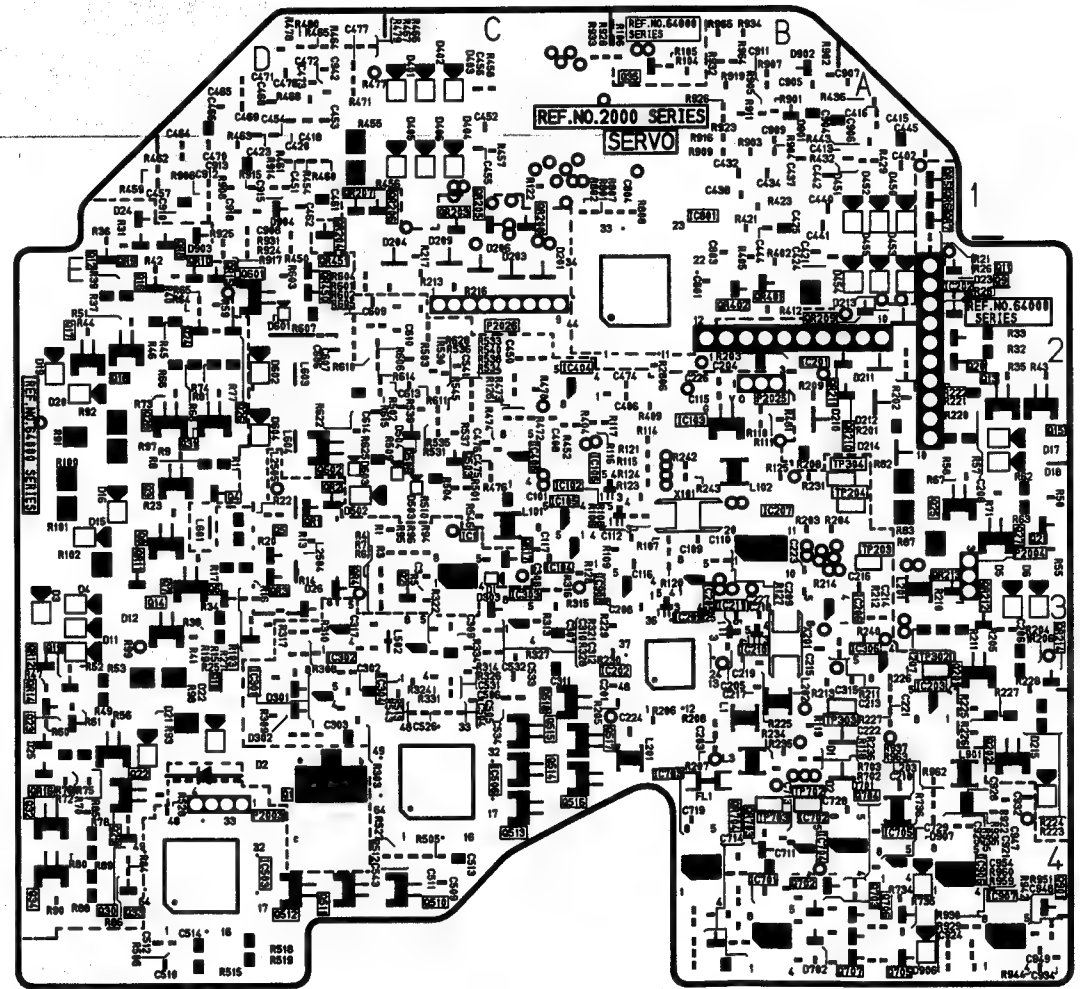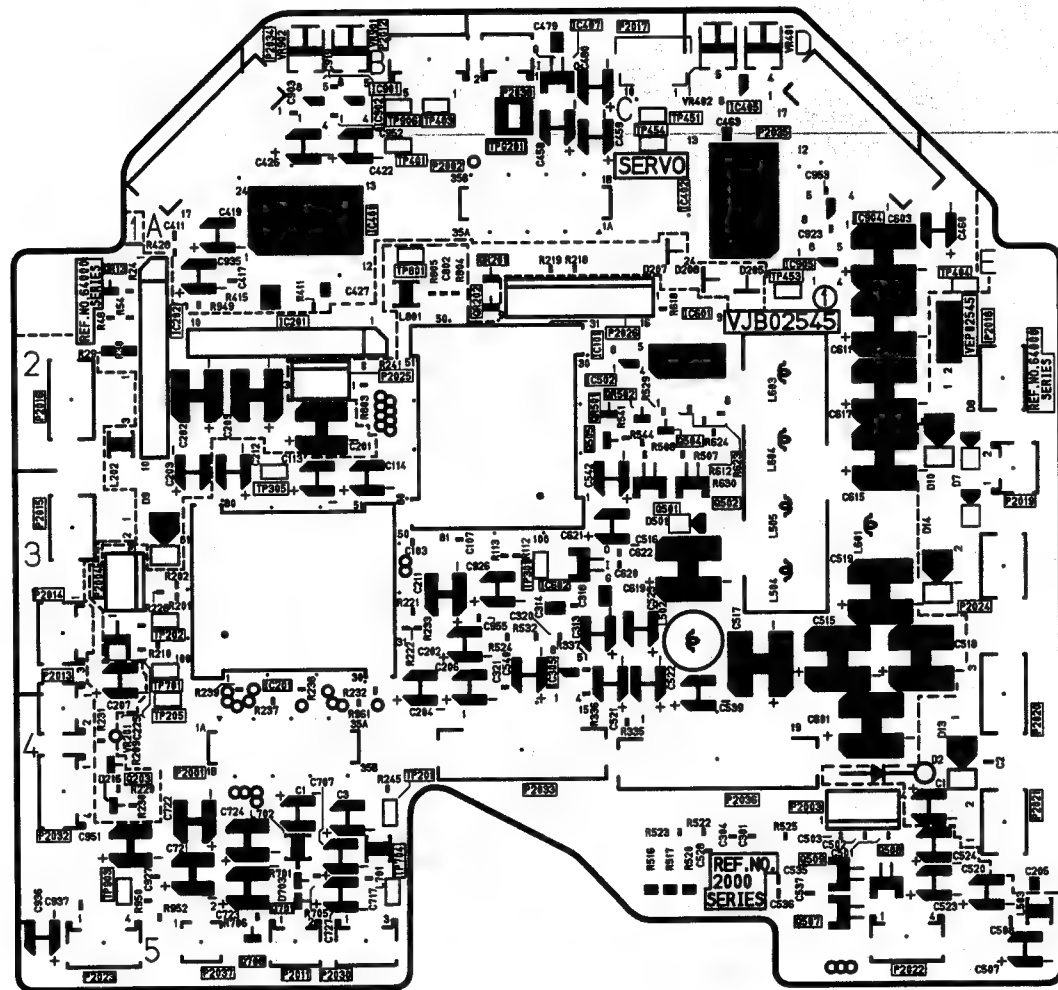
MOTHER P.C.BOARD (VEP000E6A)

COMPONENT SIDE

REF	LOC	REF	LOC
IC9104	G5	P9312	D3
IC9106	G2	P9501	G3
P9101	E5	P9502	H2
P9102	D5	P9503	H1
P9301	D1	P9504	H5
P9304	D2	P9505	H4
P9305	D2	Q9101	E4
P9306	D3	Q9203	H2
P9307	D4	TG9251	F1
P9308	H4	TP9251	F1
P9310	A2	VR9251	F1
P9311	A3	VR9501	F1

⚠警告 △ 印の部品は、安全上重要な部品です。交換するときは、
安全及び性能維持のため必ず指定の部品をご使用ください。

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK △ HAVE THE SPECIAL
CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE
COMPONENTS, USE ONLY THE SAME TYPE.
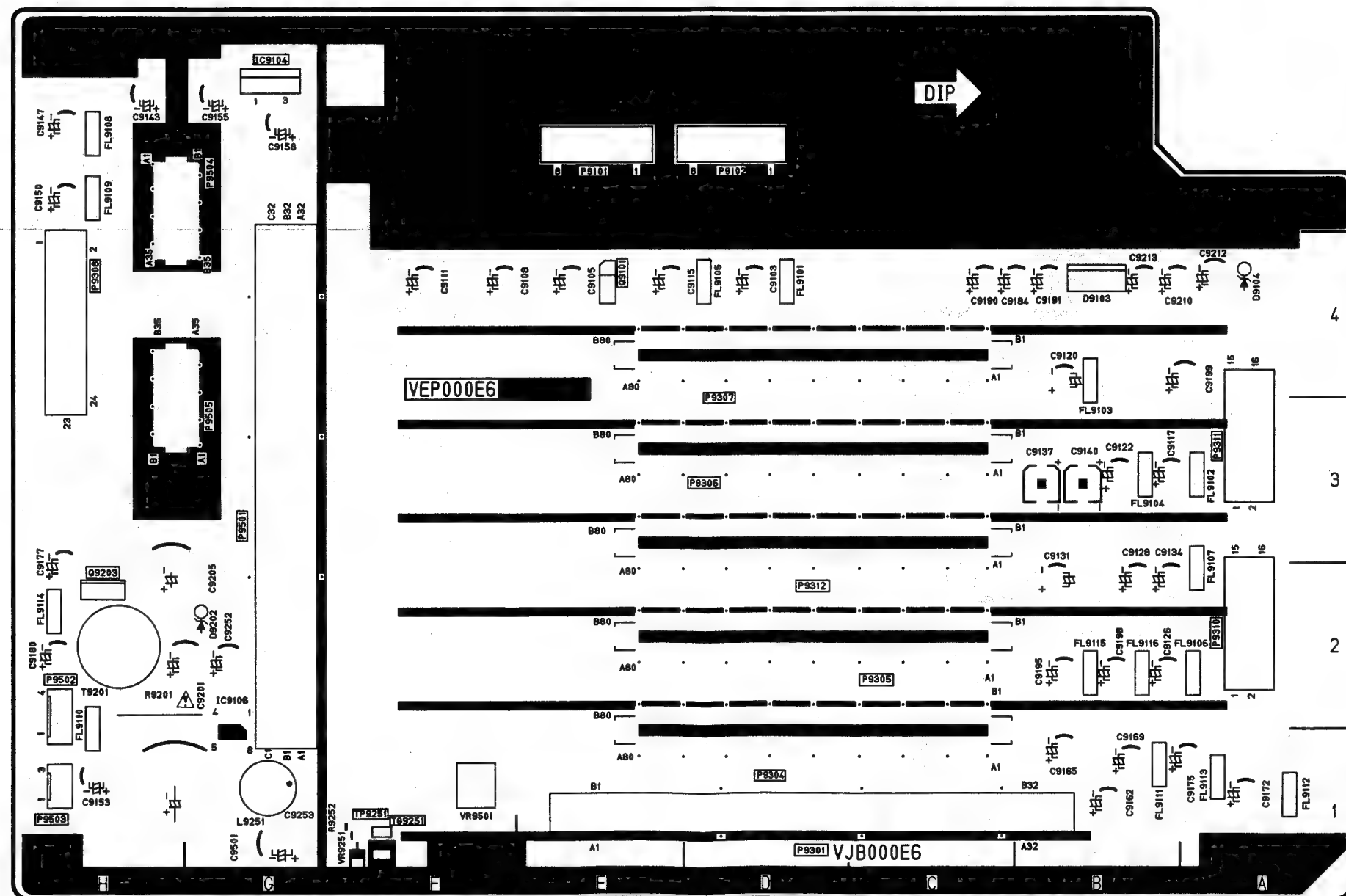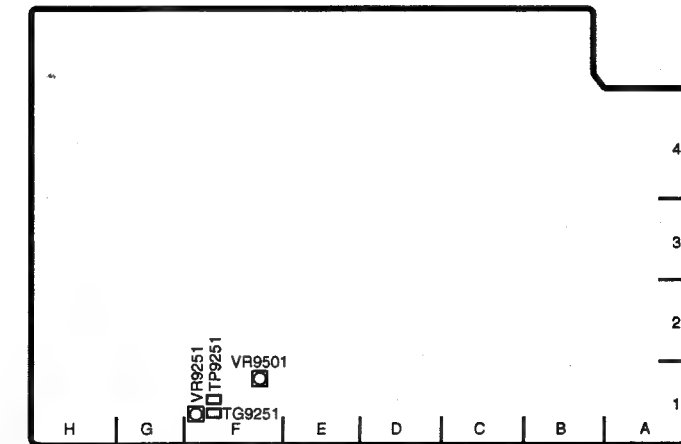
(COMPONENT SIDE)

REF	LOC	REF	LOC
IC9101	B5	Q9109	H4
IC9103	C4	Q9110	B1
IC9105	A4	Q9112	H3
IC9301	A3	Q9113	B5
IC9302	A3	Q9115	C5
Q9102	E4	Q9116	B4
Q9103	F4	Q9117	B2
Q9106	B3	Q9202	H2
Q9107	B3	QR9101	A4
Q9108	H4	QR9102	A4

(FOIL SIDE)

CBA–13

CBA–13

REAR JACK P.C.BOARD (VEP03F25A)

TG709 TG710

TG712

TG711

4 3 2 1

A B C

(COMPONENT SIDE)

TG709 TG710 VIDEO IN REF VIDEO IN
J703 J705

S VIDEO IN
J701

REAR JACK
VEP03F25

VJB03F25

1V

C727

C726

C704

C703

C719

S VIDEO OUT
J702

VIDEO OUT J704 MONITOR OUT J706

J707 CH1 AUDIO IN CH2

C717

C708 TG711
AUDIO
MONITOR OUT
CH1 J709 CH2 J708 CH1 AUDIO OUT CH2

C711

P701 P702

A B C

(COMPONENT SIDE)

CBA–14

(FOIL SIDE)

VIDEO IN TG710 TG709 IC701
J703

REF VIDEO IN
J705

S VIDEO IN
J701

REAR JACK

J707 AUDIO IN
CH2 CH1

VIDEO OUT S VIDEO OUT
J702

MONITOR OUT
J706 J704

AUDIO
MONITOR OUT
CH2 CH1
J708 J709
AUDIO OUT

TG707 P702 TP704 TP703 P701
TG708

IC702

IC703

A B C

(FOIL SIDE)

CBA–14

POWER 1 P.C.BOARD (VEP01791A)

POWER 2 P.C.BOARD (VEP01792A)

内は充電部です。AC100Vが加わっておりますので点検、修理のときは感電しないよう十分ご注意ください。

CAUTION

THE ⬚ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

⚠警告 ⚠ の部品は、安全上重要な部品です。交換するときは、安全及び性能維持のため、必ず指定の部品をご使用ください。

IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.
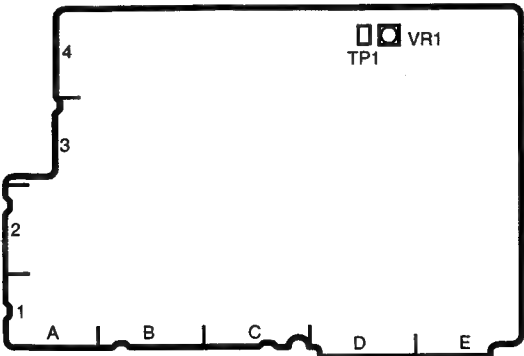
COMPONENT SIDE

REF	LOC
IC1	C4
IC2	D4
IC3	E2
P1	A1
P2	E1
P3	D1
P4	C1
Q1	D4
Q2	D1
TP1	D4
VR1	D4
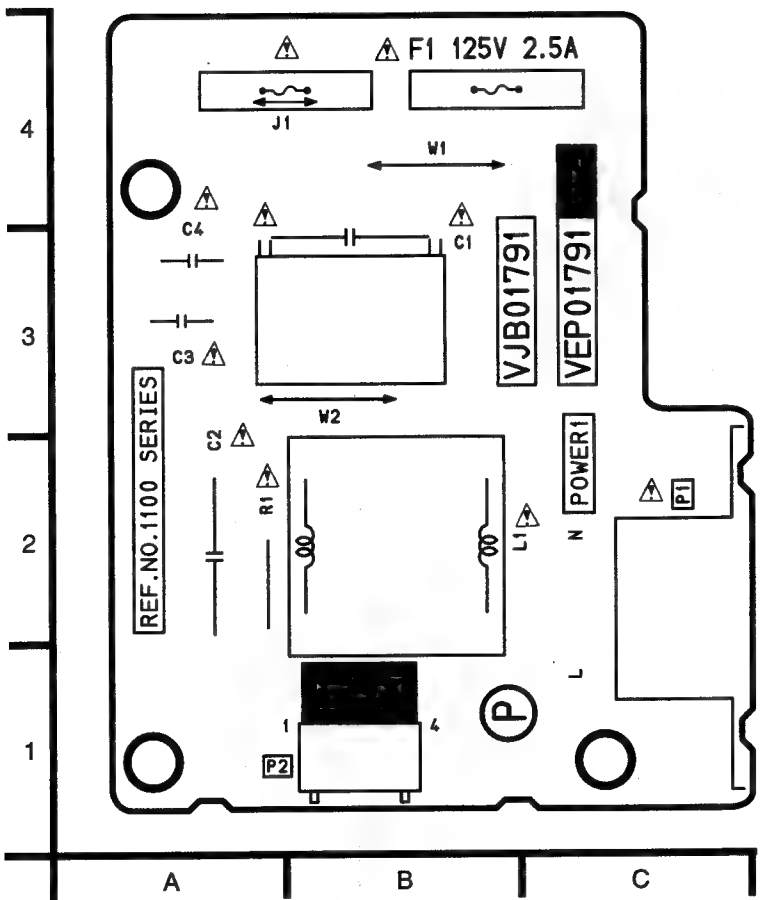
(CPMPONENT SIDE)

CBA–15
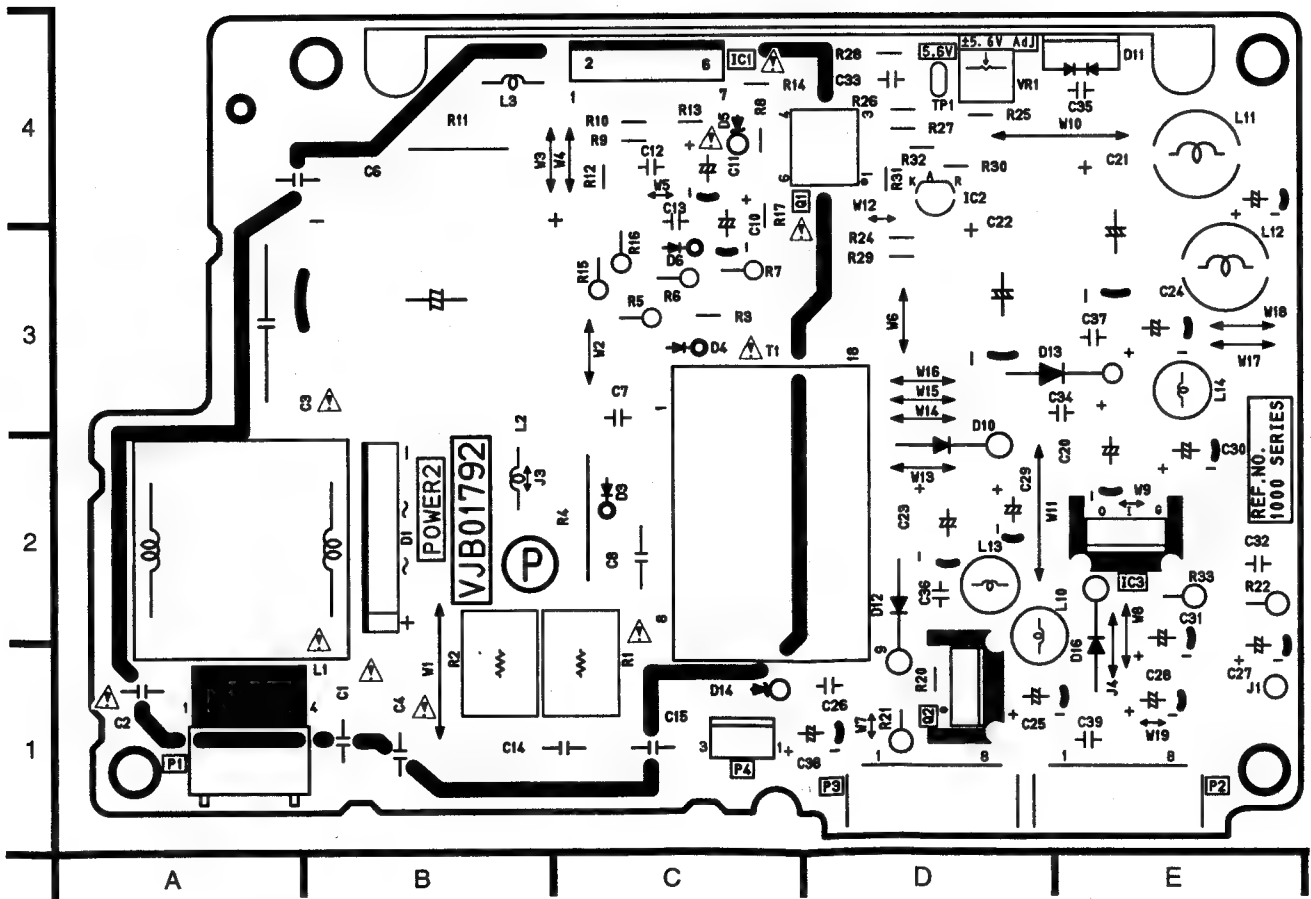
(COMPONENT SIDE)

CBA–15

SECTION 8

EXPLODED VIEWS
&
PARTS LIST

Note:
1. *Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000
   OHMS, all capacitors are in MICROFARADS (μF), P=$\mu\mu$F.
3. The P.C. Board units marked with "■" shown below the main assembled parts.
4. The parts marked with E on the exploded view show the electric parts.
5. IMPORTANT SAFETY NOTICE
   Components identified with the mark <!> have the special characteristics for safety. When replacing
   any of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.
   After the discontinuation of this assembly in production, it will no longer be available

<<Abbreviations for part>>

<NAME>		<DESCRIPTIONS>
C. CAPACITOR	:	CERAMIC CAPACITOR
C. CAPACITOR	CH :	CERAMIC CHIP CAPACITOR
E. CAPACITOR	:	ELECTROLYTIC CAPACITOR
G. CAPACITOR	:	GLASS CAPACITOR
M. CAPACITOR	:	MICA CAPACITOR
P. CAPACITOR	:	PLASTIC FILM CAPACITOR
S. CAPACITOR	:	SEMI-CONDUCTOR CAPACITOR
T. CAPACITOR	:	TANTALUM CAPACITOR
TRIMMER	:	TRIMMER
C. RESISTOR	:	CARBON RESISTOR
F. RESISTOR	:	FUSE RESISTOR
M. RESISTOR	:	METAL OXSIDE RESISTOR
M. RESISTOR	CH :	METAL OXSIDE CHIP RESISTOR
S. RESISTOR	:	SOLID RESISTOR
V. RESISTOR	:	VARIABLE RESISTOR
W. RESISTOR	:	WIRE WOUND RESISTOR
COMBI. TR-R	:	TRANSISTOR-RESISTOR COMBINATION PARTS
COMBI. R-R	:	RESISTOR-RESISTOR COMBINATION PARTS
COMBI. C-R	:	CAPACITOR-RESISTOR COMBINATION PARTS
COMBI. C-R-R	:	CAPACITOR-RESISTOR-COIL COMBINATION PARTS
P.C. BOARD	:	PRINTED CIRCUIT BOARD
W/COMPONENT	:	WITH COMPONENT

CONTENTS

SERVICING FIXTURES & TOOLS

AJ-D250P

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VFK1145	BACK TENSION METER(T2-M30)	1						
2	VFK1149	POST DRIVER	1						
3	VFK71	DIAL TORQUE GAUGE(150G)	1						
4	VFK1191	DIAL TORQUE GAUGE(45G)	1						
5	VFK1152	DIAL TORQUE GAUGE ADAPTOR	1						
6	VFK0357	ECCENTRIC SCREWDRIVER(1.5	1						
7	VFK1154	POST HEIGHT FIXTURE	1						
8	VFK1153	MECH. NEUTRAL PLATE(POST)	1						
9	VFK1157	MECH. NEUTRAL PLATE(CASSE	1						
10	VFK1155	NEUTRAL POSITION TOOL(GOL	1						
11	VFK1156	NEUTRAL POSITION TOOL(BLA	1						
12	VFK1208	NEUTRAL POSITION TOOL(BLA	1						
13	VFK1150	NUT DRIVER(5.5MM)	1						
14	VFK1151	NUT DRIVER(2.5MM)	1						
15	VFK1188	DIAL TENSION GAUGE(30G)	1						
16	VFK0948A	CHECK LIGHT	1						
17	VFK0749	FROIRAL GREASE(FOR PLASTI	1						
18	MOR265	MOLYTONE GREASE(FOR METAL	1						
19	VFK1146	PHILIPS DRIVER(FINE)(00-7	1						
20	VFK1147	PHILIPS DRIVER(FINE)(0-10	1						
21	VFK1148	HEX. DRIVER(1.5)	1						
22	VFK1178	HEX. DRIVER(0.89)	1						
23	VFK1179	HEX. DRIVER(0.71)	1						
24	VFK1190	HEX. WRENCH	1						
25	VFK1209	TORQUE DRIVER(0.4-3KG)	1						
26	VFK0912	POST AXIS DRIVER(1.5MM)	1						
27	VFK1300	A/D BOARD(DAQ-12,QUATECH)	1						
28	VFM3580KM	ALIGNMENT TAPE(NO.1)	1						
29	VFM3581KM	ALIGNMENT TAPE(NO.2)	1						
30	VFM3582KM	ALIGNMENT TAPE(NO.3)	1						
32	VFK1159	LISTA SOFTWARE	1						
33	VFK1186	LISTA CABLE	1						
34	VFK0369	TWEEZERS	1						
35	VFK0371	RADIO PRIER	1						
36	VFK0372	CUTTER PRIER	1						
37	VFK0338	TRIMMER ADJUSTMENT DRIVER	1						
38	VFK0337	PHILIPS DRIVER	1						
39	VFM3000EDS	ALIGNMENT TAPE(DV LISTA)	1						
40	VFM3010EDS	ALIGNMENT TAPE(DV COLOR B	1						
45	VFK1160B	RF ADJUSTMENT SOFT	1						
46	VFK1163	RF ADJUSTMENT TOOL	1						

CASING PARTS ASSEMBLY

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VYM0187	TOP PLATE ASS'Y	1						
1-1	VHD0274	SCREW	2						
1-2	VMP5903	TOP PLATE ANGLE	1						
1-3	VMX2510	SPACER	2						
1-4	VMX2930	SPACER	1						
1-5	VMZ2325	TOP PANEL BARRIER	1						
2	VMP5354	P.C.BOARD FIXING ANGLE	1						
3	VMX2674	P.C.B. HOLDER GUM	1						
4	VXA5937	CHASSIS HOLDER FRAME ASS'Y	1						
5	VEP00Y68A	FLEXIBLE CABLE P.C.BOARD	1						
6	VYP7370	FRONT PANEL (1) ASS'Y	1						
7	VMP6147	TOP COVER ANGLE	1						
8	VMB2923	BLINDER SPRING	1						
9	VKF2785	BLINDER PANEL	1						
10	VYQ1401	CASSETTE GUIDE ASS'Y	1						
11	VGF0706	FLEXIBLE CABLE BARRIER	1						
12	VGF0687	SLIDE SW SHEET	2						
13	VGU5582	SWITCH KNOB	2						
14	VGU5067	VOLUME KNOB	1						
15	VMZ2714	AC CABLE BARRIER	1						
16	VMJ24AW270MO	FRONT FLAT CABLE	1						
17	VMP5369	CONNECTOR ANGLE	1						
18	VJH1105	REAR JACK PLATE	1						
19	VYF2633	BOTTOM PLATE ASS'Y	1						
19-1	VMG1197	FOOT	1						
20	VGF0527	FAN GUARD	1						
21	VMX2936	GUIDE SPACER	1						
22	VMT0936	GASKET	1						
23	VMC1483	GND PLATE	1						
24	VMP5356	MECHA ASS'Y FIXING PLATE	1						
50	XTN4+10G	SCREW	5						
51	XTV3+10GFZ	SCREW	4						
52	XTV3+6F	SCREW	18						
53	XTV3+6FFR	SCREW	3						
54	XTV3+6FFZ	SCREW	4						
55	XTV3+8G	SCREW	4						
56	XYE4+EF8	SCREW	1						
57	XQN26+A25FC	SCREW	3						
58	XUC3F	E-RING	2						
59	XYN3+F5FZ	SCREW	4						
60	XSB4+4FCW	SCREW	4						
61	XWC4BFY	WASHER	1						

CASING PARTS ASSEMBLY

MECHANICAL CHASSIS ASSEMBLY(1)

AJ-D250P

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	VEM0686	S REEL MOTOR A ASS'Y	1	(M)					
2	VEM0687	T REEL MOTOR A ASS'Y	1	(M)					
3	VMS5923	REEL OUTER RAIL	2						
4	VMS5924	REEL INNER RAIL	2						
5	VXL2589	S BASE DRIVE ARM ASS'Y	1						
6	VMB2944	CHARGE SPRING	2						
7	VXL2590	T BASE DRIVE ARM ASS'Y	1						
8	VXA5625	SLIDE ROD ASS'Y	1						
9	VXL2597	M STOPPER DRIVE ARM ASS'Y	1						
9-1	VMB2955	M STOPPER SPRING (1)	1						
9-2	VMB3017	M STOPPER SPRING (2)	1						
10	VXA6174	L-M BRAKE RELEASE ASS'Y	1						
11	VXZ0439	S BRAKE ARM ASS'Y	1						
12	VXZ0440	T BRAKE ARM ASS'Y	1						
13	VMZ2603	REEL FLEX. COVER	2						
31	VMX1061	WASHER	7						
32	VMX1079	CUT WASHER	2						
33	VMX1394	CUT WASHER	2						
34	XQN2+CF3	SCREW	4						

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.

MECHANICAL CHASSIS ASSEMBLY(1)

PRT-4

MECHANICAL CHASSIS ASSEMBLY(2)

AJ–D250P

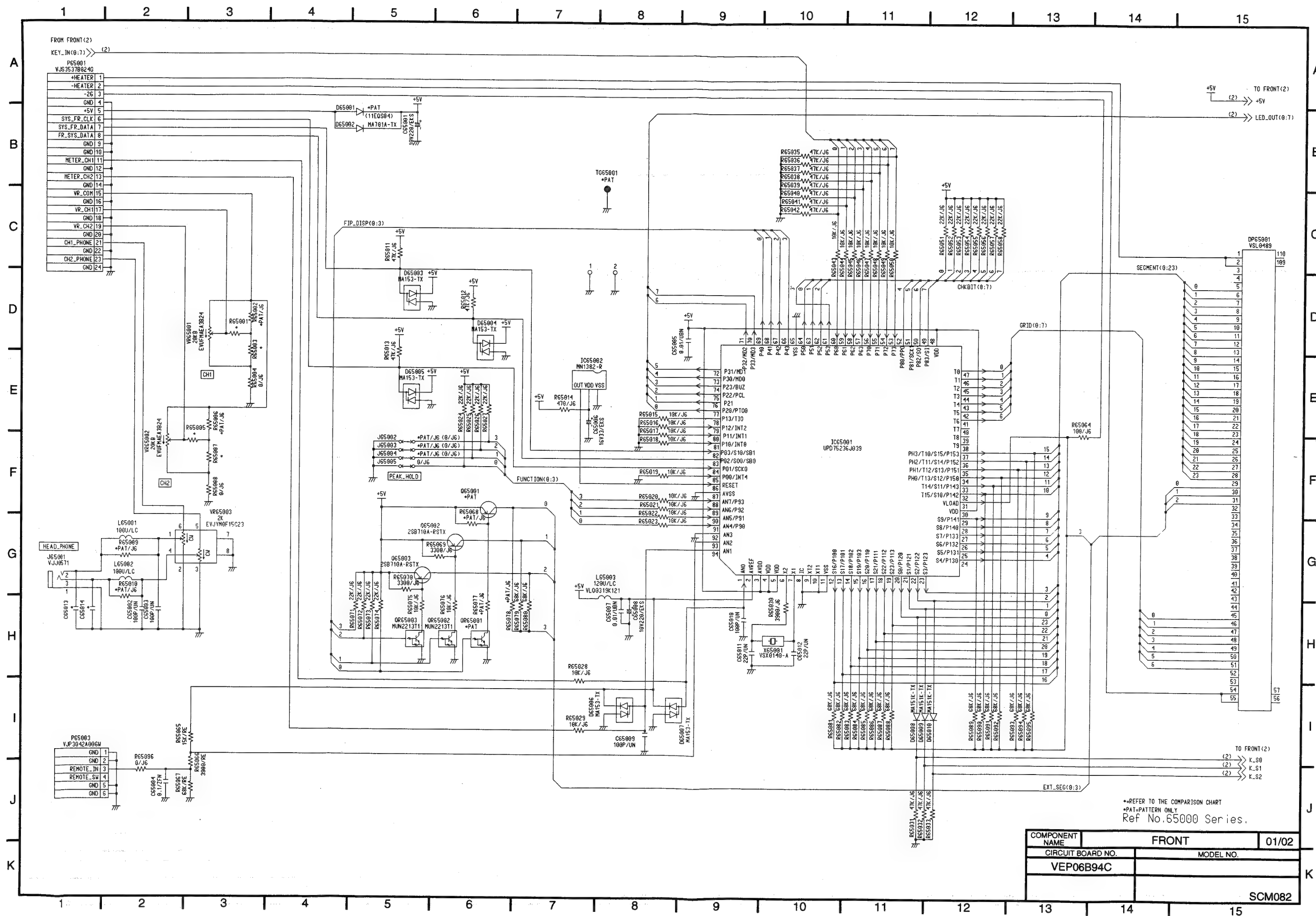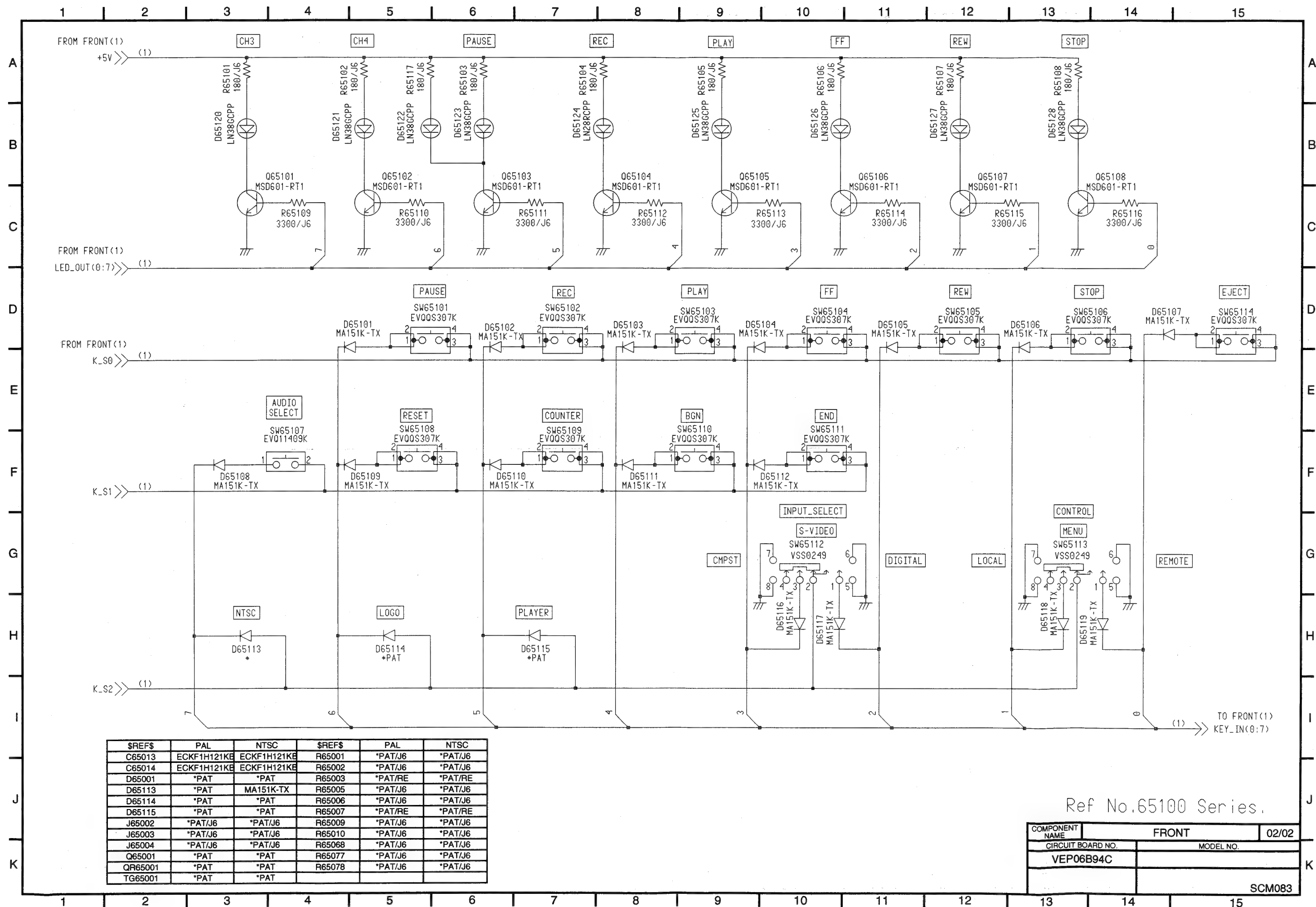| Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
					67	XQN2+CF3	SCREW	12	
1	VXA5554	A/C HEAD BASE (1) ASS'Y	1		68	XQN2+CF4	SCREW	3	
2	VED0419	A/C HEAD	1	(M)	69	XUC12FP	E-RING	2	
3	VXA6067	A/C HEAD BASE (2) ASS'Y	1		70	XVE2B4FZ	HEX SCREW	3	
4	VMB2935	A/C HEAD HIGHT SPRING	1		71	XVE2B6FP	HEX SCREW	1	
5	VEG1498	CYLINDER UNIT	1	(M)	72	XVE2B12FP	HEX SCREW	1	
6	VXA5715	EMERGENCY SHIFT HOLDER ASS'Y	1		73	VX00439	SCREW	3	
7	VEM0645	LOADING MOTOR (1)A ASS'Y	1	(M)	74	VMX0967	CUT WASHER	3	
8	VSJ0227	PINCH SOLENOID	1	(M)	75	VMX1061	WASHER	3	
9	VXA5584	MOTOR ANGLE ASS'Y	1		76	VMX1079	CUT WASHER	1	
10	VES0918	MODE SW ASS'Y	1	(M)	77	XWA2B	WASHER	4	
11	VMA0A35	PINCH SOLENOID BASE	1		78	XWE2	WASHER	2	
12	VXL2924	CLEANING ARM A ASS'Y	1	(M)	79	XWE16VW	WASHER	1	
12-1	VMX2150	CLEANER ROLLER HOLDER	1		80	XXE2A6FP	HEX SCREW	1	
12-2	VXP1963	CLEANER ROLLER ASS'Y	1		81	XWG2	WASHER	3	
12-3	VMB3114	CLEANER ROLLER SPRING	1		82	XWGV15Z32G	WASHER	2	
13	VXL2870	T2 ARM ASS'Y	1		83	VHD0045	NYLON NUT	1	
13-1	VMB3304	T2 ARM SPRING	1		84	VHN0312	NUT	2	
14	VXL2831	TENSION ARM A ASS'Y	1	(M)	85	XQN2+AQ3.5FZ	SCREW	1	
14-1	VXP1761	TENSION ROLLER	1		86	XQN2+AJ5	SCREW	1	
14-2	VMB3220	TENSION LEG SPRING	1		87	XQN2+A1.5	SCREW	4	
14-3	VXA6173	MAGNET HOLDER ASS'Y	1		88	XQN2+A4	SCREW	1	
15	VXA5791	TENSION LEG SPRING HOOK ASS'Y	1		89	VMX1394	CUT WASHER	1	
16	VXL2709	S1 LOADING ARM ASS'Y	1	(M)	*	VXY1512Z1	MECHANISM	1	
17	VMD3731	LOADING RAIL	1						
18	VXA6379	T1 BOAT ASS'Y	1	(M)					
19	VHD0561	HEX SCREW	1						
20	VXA6052	S POST BASE A ASS'Y	1	(M)					
21	VXP1683	T4 CONNECTION GEAR ASS'Y	1						
22	VXL2772	T4 ARM ASS'Y	1						
23	VMB2950	T4 THRUST SPRING	1						
24	VXL2952	T LOADING ARM ASS'Y	1	(M)					
25	VMS5906	T3 UPPER FRANGE	1						
26	VMS5905	T3 SLEEVE	1						
27	VMS5904	T3 LOWER FRANGE	1						
28	VMB2929	T3 SPRING	1						
29	VMB2933	PINCH RELEASE SPRING	1						
30	VEK7927	INSULLATION SENSOR	1						
31	VEK8619	LED HOLDER A P.C.BOARD	1						
32	VMA9411	PINCH SOLENOID ANGLE	1						
33	VXA5820	TENSION SENSOR ASS'Y	1						
34	VXL2835	PINCH ARM ASS'Y	1	(M)					
35	VXL2588	PINCH GUIDE ARM ASS'Y	1						
36	VXA5570	T SECTOR GEAR ASS'Y	1						
37	VXL2838	TENSION LEG. GUIDE ARM	1						
38	VXA5567	S SECTOR GEAR ASS'Y	1						
39	VXA5564	T4 SECTOR GEAR ASS'Y	1						
40	VXA6348	MAIN ROD ASS'Y	1						
41	VXA5627	THRUST SHAFT HOLDER ASS'Y	1						
42	VDG1166	MOTOR WARM GEAR	1						
43	VDG1268	MOTOR EMARGENCY GEAR A(A)	1						
44	VDG1267	MOTOR EMARGENCY GEAR B(A)	1						
45	VXL2889	MAIN CAM ARM ASS'Y	1						
46	VDG1168	MAIN CAM GEAR	1	(M)					
47	VMB2937	A/C HEAD ADJUST SPRING	1						
48	VXL2600	EJECT ARM ASS'Y	1						
49	VMD3475	T1 GUIDE ASS'Y	1						
50	VMB2934	SPRING	1						
51	VMB3051	CLEANER RETURN SPRING	1						
52	VXA6077	CLEANER BASE 1 ASS'Y	1						
53	VXA6078	CLEANER SOLENOID ASS'Y	1						
53-1	VSJ0226	CLEANER SOLENOID	1	(M)					
53-2	VMA9877	CLEANER SOLENOID BASE	1						
54	VMM0429	CLEANER INTERLOCK	1						
55	VXQ0556	THRUST SCREW ASS'Y	1	(M)					
56	VMT0871	SILENCER A	1						
57	VMT0872	SILENCER B	1						
61	VHD0356	SCREW	1						
62	XQN2+A3	SCREW	1						
64	XQN2+A35FZ	SCREW	3						
65	XQN2+AM2	SCREW	3						
66	XQN2+AM4	SCREW	1						

MECHANICAL CHASSIS ASSEMBLY(2)
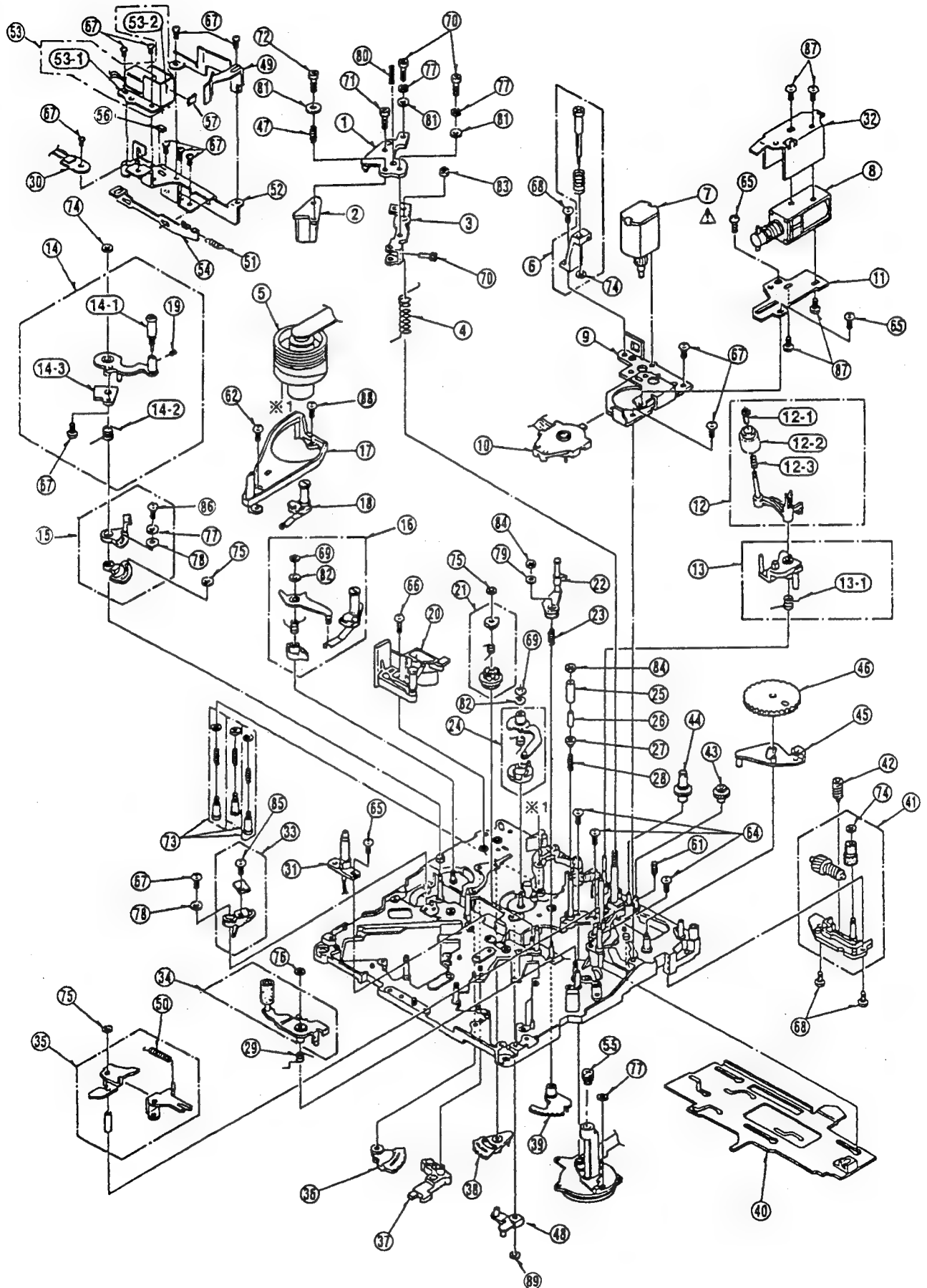
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXL2656	MIC DRIVE ARM (A) ASS'Y	1						
2	VMB3018	MIC DRIVE SPRING	1						
3	VXL2657	MIC DRIVE ARM (B) ASS'Y	1						
4	VDB1429	MIC DRIVE ARM BOSS	1						
5	VXL2613	REEL DRIVE ARM ASS'Y	1						
6	VDG1192	REEL DRIVE CAM GEAR	1						
7	VDG1193	REEL DRIVE WORM WHEEL	1						
8	VEM0585	REEL DRIVE MOTOR ASS'Y	1	(M)					
9	VDG1211	MIC GENEVA GEAR	1						
10	VXP1698	REEL DRIVE WORM ASS'Y	1						
11	VXA5628	MOTOR BASE ASS'Y	1						
12	VMB3019	MIC DRIVE RETURN SPRING	1						
13	VEK7726	REEL SENSOR P.C.BOARD	1						
14	VSJ0216	BRAKE SOLENOID	3	(M)					
15	VXA5575	S-BRAKE SOLENOID BASE ASS'Y	1						
17	VXA6199	DISTINCTION SW ASS'Y	1	(M)					
18	VXA5579	M STOPPER SOLENOID ASS'Y	1						
19	VXA5887	T-BRAKE SOLENOID BASE ASS'Y	1						
20	VXK1543	SUB CHASSIS	1						
21	VEK7692	SENSOR HOLDER ASS'Y	1						
22	VMS6193	T BRAKE RELEASE ARM SHAFT	1						
23	VMB2957	S BRAKE SPRING	1						
24	VMB2987	T BRAKE SPRING	1						
31	XQN2+CF3	SCREW	13						
32	XYN26+K6	SCREW	4						
33	XQN2+A1.5	SCREW	2						
34	XQN2+A2	SCREW	2						
35	VMX1079	CUT WASHER	5						
36	VMX0967	CUT WASHER	4						
37	VMX1548	CUT WASHER	2						
38	XQN2+A1.5	SCREW	4						
E14	VEP82218C	SERVO P.C.BOARD	1						

SUB CHASSIS ASSEMBLY
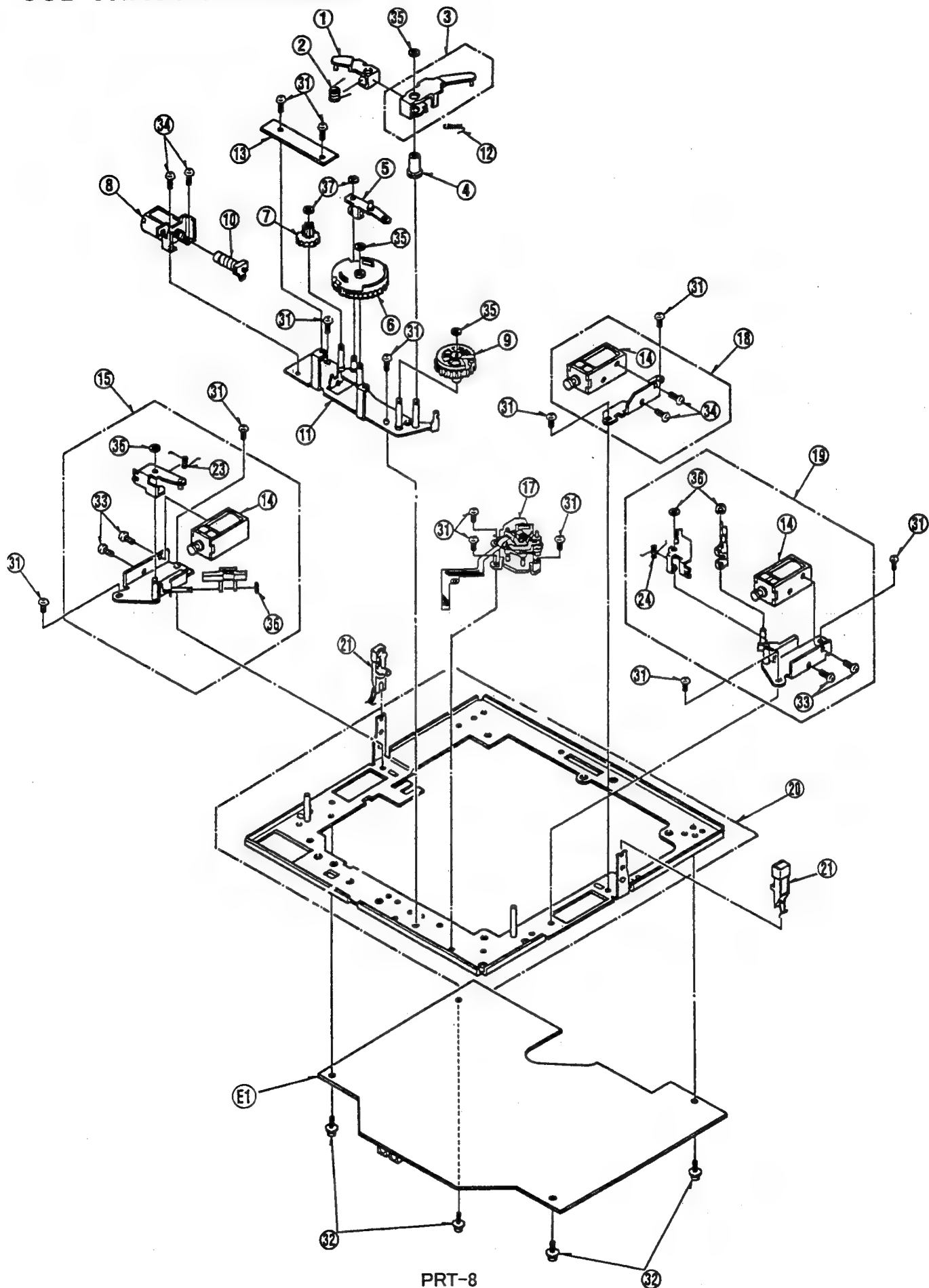
PRT-8

CHASSIS FRAME ASSEMBLY

AJ–D250P

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠ 1	VSC4536	SHIELD CASE	1	
2	VJF0469	CLAMPER	1	
3	VRF0197	FAN MOTOR	1	
4	VEE9627	FG CABLE	1	
⚠ 5	VMZ2752	SHIELD SHEET A	1	
⚠ 9	VMZ2753	SHIELD SHEET B	1	
10	VSC4637	SHIELD COVER	1	
13	VYH0278	HANDLE ASS'Y	1	
13-1	VGW1569	HANDLE DECORATION PLATE	1	
13-2	VKH0388	HANDLE	1	
13-3	VMX2845	SPACER	2	
13-4	VMP5938	HANDLE ANGLE	2	
14	VJF0004	WIRE SADDLE	2	
15	VKA0117	PLASTIC FOOT	4	
16	VMP5365	REAR CENTER FRAME	1	
17	VMP5353	BACK FRAME	1	
18	VWJ09SW220L0	232C FLAT CABLE	1	
19	VGQ4426	GUIDE RAIL L	2	
20	VMP5351	SIDE FRAME (R)	1	
21	VES0858	POWER SWITCH	1	
22	VMP5363	POWER SW BRACKET	1	
23	VMP5361	FRONT FRAME	1	
24	VJF1259	EDGE HOLDER	2	
25	VMP5352	CENTER FRAME	1	
26	VGQ1016	GUIDE RAIL	2	
27	VKG0555	CONNECTOR HOLDER	1	
28	VMP5556	CLAMPER ANGLE	1	
29	VGF0723	BLIND SHEET	1	
51	XTV3+10F	SCREW	4	
52	XTV3+6F	SCREW	13	
53	XTV3+6FFR	SCREW	9	
54	VHD5013	SCREW	1	
55	XYE4+EF8	SCREW	1	
56	XSN3+8FZ	SCREW	2	
57	XSB3+16FZS	SCREW	2	
58	XTW3+8LR	SCREW	4	
61	XYE3+EF8	SCREW	5	
62	XSS4+14F	SCREW	2	
63	XTV3+6F	SCREW	2	
E9	VEP06B93B	RS-232C P.C.BOARD	1	

CHASSIS FRAME ASSEMBLY
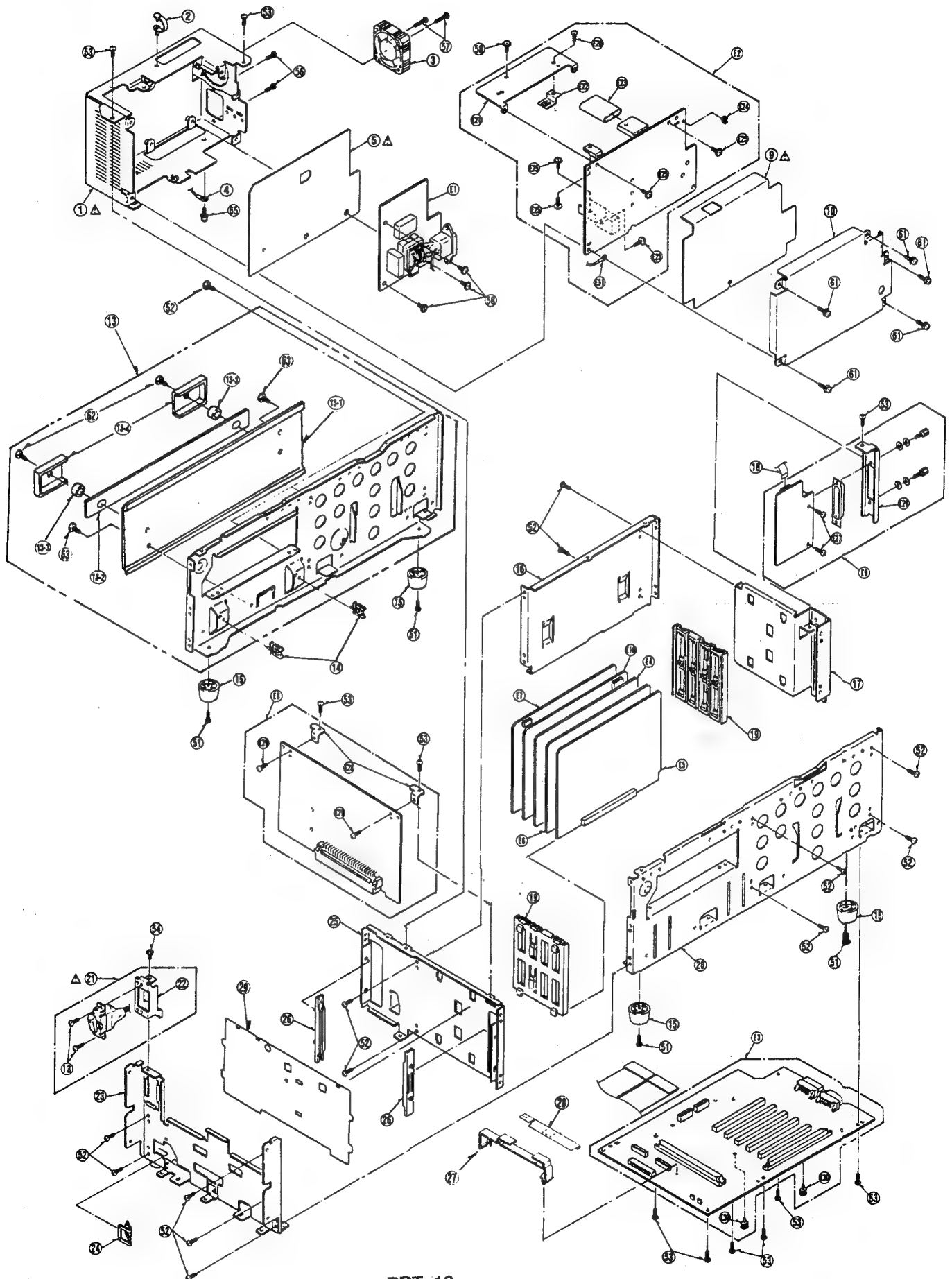
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXA6593	CASSETTE COMPARTMENT	1	
2	VMS5865	MAIN SHAFT	1	
3	VMA9849	TOP PLATE	1	
4	VXA6572	FRONT GUIDE 1 ASS'Y	1	
5	VMB3075	M GUIDE SPRING	2	
6	VML3191	M GUIDE RIGHT LEVER	1	
7	VML3192	M FRONT GUIDE	2	
8	VML3190	M GUIDE LEFT LEVER	1	
9	VML3397	CASSETTE PROTECT PLATE	1	
10	VMA9760	L OPENER	1	
12	VMB2926	SPRING	1	
13	VML2A50	BLINDER PANEL OPENER	1	
14	VXA6074	R SIDE PLATE 1 ASS'Y	1	
15	VML3282	SUB RAIL (R)	1	
16	VEK7695	SIDE FLEXIBLE	1	
17	VXA5766	MAIN RACK R ASS'Y	1	
18	VDG1156	WIPER RACK	2	
20	VDB1395	MAIN SHAFT ANGLE	2	
21	VDG1412	INTERLOCK GEAR	2	
22	VML3193	OPENER DRIVE ARM	1	
23	VXL2692	OPENER ANGLE ASS'Y	1	
24	VMB2979	SPRING	1	
25	VXA6072	SIDE PLATE L 1 ASS'Y	1	
26	VML3281	SUB RAIL (L)	1	
27	VDG1413	INTERMEDIATE GEAR	1	
28	VDP1643	WIPER ROLLER	2	
29	VDG1414	CLUTCH GEAR	1	
30	VMB2980	CLUTCH SPRING	1	
31	VDG1236	WORM WHEEL	1	
32	VXA5848	MOTOR ANGLE (A) ASS'Y	1	
33	VXP1797	E.E SLOT IN WORM ASS'Y	1	
34	VXA5597	MOTOR ASS'Y	1	(M)
35	VMA9673	EMARGENCY ANGLE	1	
36	VEK7793	MOTOR P.C.BOARD	1	
37	VMA9668	HOLDER PLATE	1	
38	VEK7715	HOLDER FLEXIBLE ASS'Y	1	
39	VXA6075	MAIN RACK (L) ASS'Y	1	
40	VML3485	WIPER ARM L	1	
41	VMB3391	WIPER SPRING L	1	
42	VDG1163	WIPER GEAR	2	
43	VMB3390	WIPER SPRING R	1	
44	VML3484	WIPER ARM R	1	
45	VDP1642	CASSETTE GUIDE ROLLER (2)	2	
46	VDP1641	CASSETTE GUIDE ROLLER (1)	2	
47	VXA5757	CASSETTE HOLDER 1 ASS'Y	1	
48	VXA5758	ROD L	1	
49	VXA5759	ROD R	1	
50	VMB3064	SLIDE SPRING	2	
51	VML3249	SIDE GUIDE L	1	
52	VML3250	SIDE GUIDE R	1	
53	VMB3061	SLIDE GUIDE SPRING L	1	
54	VMB3062	SLIDE GUIDE SPRING R	1	
55	VMS6666	KICK OFF ROD SHAFT	2	
56	VML2A54	KICK OFF ARM L	1	
57	VML2A55	KICK OFF ARM R	1	
58	VMB2928	KICK OFF SPRING	2	
59	VML2A53	CASSETTE HOLDER ARM	2	
60	VMB2927	CASSETTE HOLDER SPRING	2	
61	VMX2833	ML DETECTION ROLLER	2	
62	VMS5882	CASSETTE HOLDER SHAFT	1	
63	VMB3253	M-L DETECTION SPRING	2	
64	VMX2559	CASSETTE PRESSURE ROLLER(2)	3	
65	VMX2524	CASSETTE PRESSURE ROLLER(1)	1	
66	VDG1246	EMARGENCY GEAR	1	
67	VMB3109	EMARGENCY SPRING	1	
68	VMZ2661	FRONT GUIDE COVER	1	
71	VEE9577	CABLE	1	
100	VMX0653	CUT WASHER	4	
101	VMX0967	CUT WASHER	14	
102	VMX1061	WASHER	4	
103	XQN16+A2	SCREW	8	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
104	XQN2+CF3	SCREW	4	
105,06	VHD1323	SCREW	7	
107	XQN2+A3	SCREW	5	
108	LMHD16064	SCREW	10	
109	XWGV2Y4G	WASHER	2	
110	XWGV2Z5G	WASHER	2	
E13	VEP80856A	CARRIGE P.C.BOARD	1	

CASSETTE COMPARTMENT ASSEMBLY
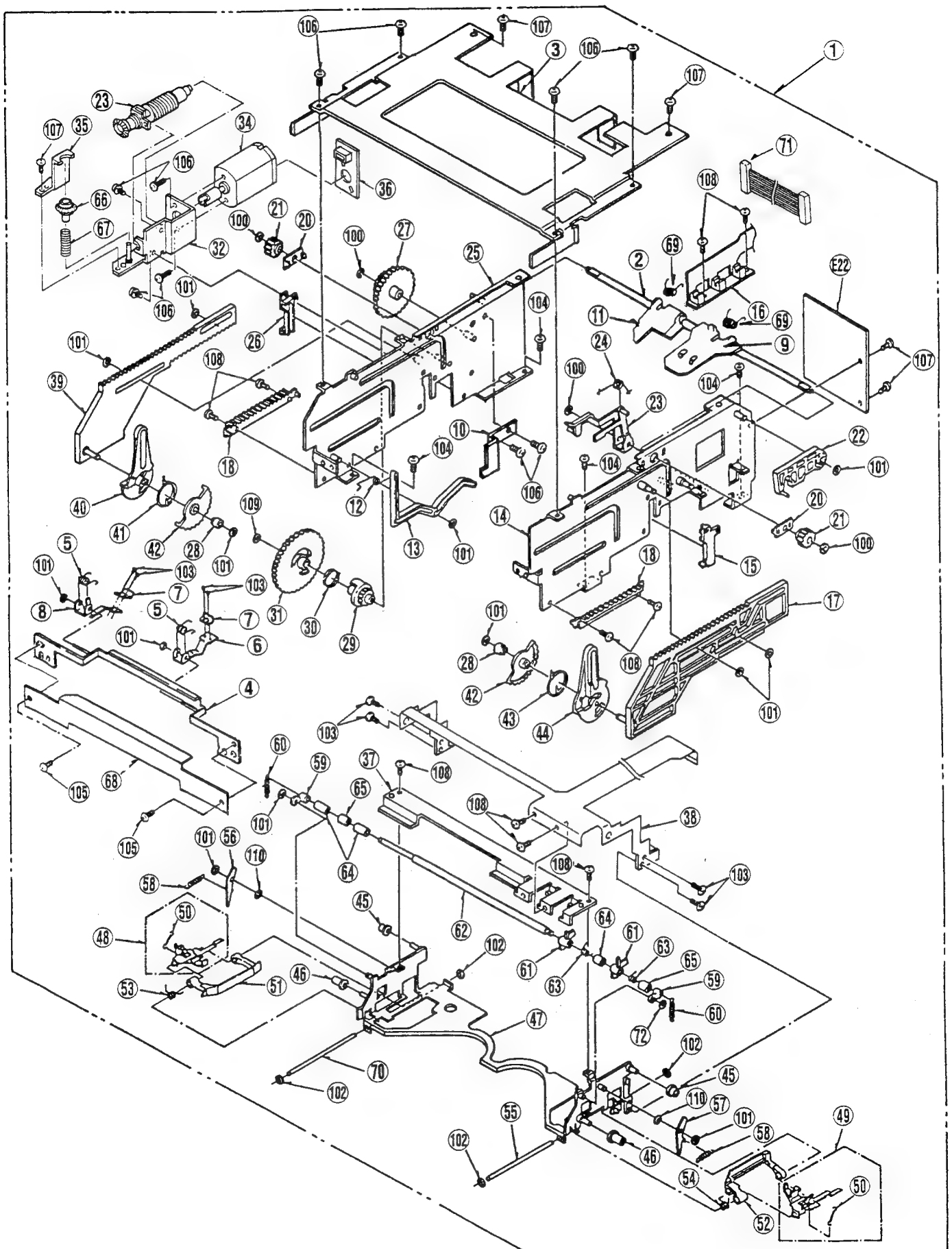
PACKING PARTS ASSEMBLY
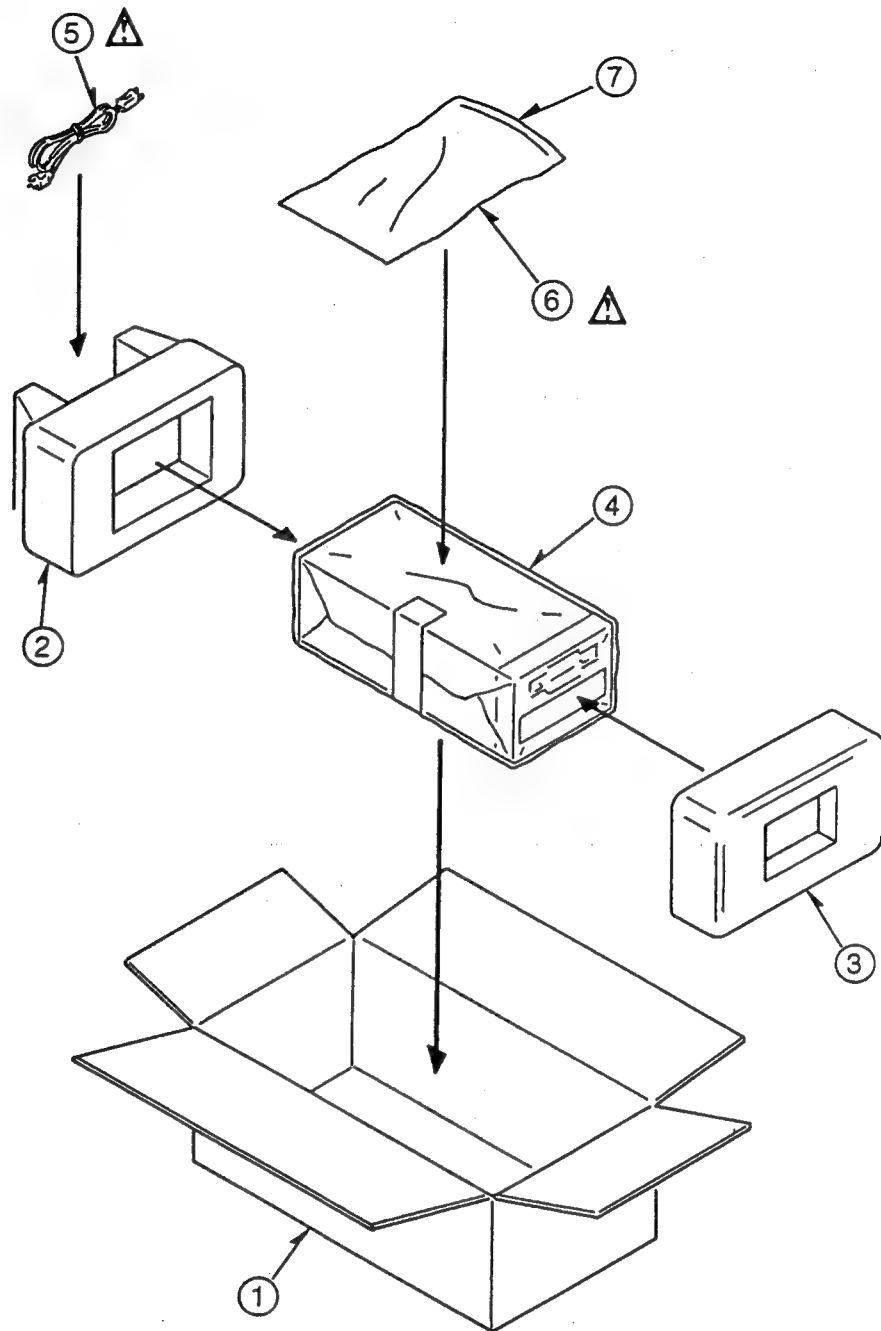
PACKING PARTS ASSEMBLY

AJ-D250P

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VPG0A24	PACKING CASE	1						
2	VPN4611	CUSHION (R)	1						
3	VPN4610	CUSHION (L)	1						
4	VPF0230	POLYETHYLENE BAG	1						
5	VJA0488	POWER CODE	1						
6	VQT8188	OPERATING INSTRUCTIONS	1						
7	VXF0170	E.EJECT ASS'Y	1						

ELECTRICAL REPLACEMENT PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	VEP01791A	POWER 1 P.C.BOARD	1	(RTL)
■ E2	VEP01792A	POWER 2 P.C.BOARD	1	(RTL)
■ E3	VEP000E6A	MOTHER P.C.BOARD	1	(RTL)
■ E4	VEP03E32B	TBC P.C.BOARD	1	(RTL)
■ E5	VEP03F00A	DIGITAL CORE P.C.BOARD	1	(RTL)
■ E6	VEP03F01A	VIDEO I/O P.C.BOARD	1	(RTL)
■ E7	VEP04737A	AUDIO P.C.BOARD	1	(RTL)
■ E8	VEP05348C	RF P.C.BOARD	1	(RTL)
■ E9	VEP06B93B	RS-232C P.C.BOARD	1	(RTL)
■ E10	VEP06D02A	AV SYSCON P.C.BOARD	1	(RTL)
■ E11	VEP03F25A	REAR JACK P.C.BOARD	1	(RTL)
■ E12	VEP06B94C	FRONT P.C.BOARD	1	(RTL)
■	VEP00Y35B	REMOTE P.C.BOARD	1	(RTL)FOR VEP06B94C
■ E13	VEP80856A	CARRIGE P.C.BOARD	1	(RTL)
■ E14	VEP02545J	SERVO P.C.BOARD	1	(RTL)
■ E15	VEP00Y68A	FFC P.C.BOARD	1	(RTL)
■ E16	VEK7793	MOTOR P.C.BOARD	1	(RTL)
■ E17	VEK8619	LED HOLDER P.C.BOARD	1	(RTL)
■ E18	VEK7726	REEL DRIVE SENSOR P.C.BOARD	1	(RTL)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	VEP01791A	POWER 1 P.C.BOARD	1	(RTL)
C1101,02	ECQU2A224MV	P.CAPACITOR 100V 0.22U	2	
F1101	XBA1C25NB5	FUSE	1	
L1101	ELF18D602	FILTER	1	
P1101	VJS2985	CONNECTOR (FEMALE)	1	
P1102	VJP2639	CONNECTOR (MALE)	1	
R1101	ERC12AGM334	S.RESISTOR 1/2W 330K	1	
		MISCELLANEOUS		
	VJF0867	CONNECTOR SPACER	1	
	VEE9627	FG CABLE	1	
	VMZ0429	FUSE COVER	1	
■ E2	VEP01792A	POWER 2 P.C.BOARD	1	(RTL)
C1001,02	VCK0260M222A	C.CAPACITOR 2200P	2	
C1003	ECQU2A224MV	P.CAPACITOR 100V 0.22U	1	
C1004	VCK0260M102A	C.CAPACITOR 1000P	1	
C1006	ECEC2GB221D	E.CAPACITOR 400V 220U	1	
C1007	VCK0106K151	C.CAPACITOR 150P	1	
C1008	ECQE6473KF	P.CAPACITOR 630V 0.047U	1	
C1010	ECA1VXLV470	E.CAPACITOR 35V 47U	1	
C1011	ECA0GXLV331	E.CAPACITOR 4V 330U	1	
C1012	ECQB1H102JF	P.CAPACITOR 50V 1000P	1	
C1013	ECKF1H271KB	C.CAPACITOR 50V 270P	1	
C1020	EEUFA1E681E	E.CAPACITOR 25V 680P	1	
C1021,22	EEUFA1A562E	E.CAPACITOR 10V 5600U	2	
C1023	EEUFA1A122E	E.CAPACITOR 10V 1200U	1	
C1024	EEUFA1E471E	E.CAPACITOR 25V 470U	1	
C1025	ECA1EHG101	E.CAPACITOR 25V 100U	1	
C1026	ECQB1H104JF	P.CAPACITOR 50V 0.1U	1	
C1027-29	ECA1CHG101	E.CAPACITOR 16V 100U	3	
C1030,31	ECA1EHG101	E.CAPACITOR 25V 100U	2	
C1032	ECQB1H104JF	P.CAPACITOR 50V 0.1U	1	
C1033	ECQB1H473JF	P.CAPACITOR 50V 0.047U	1	
C1034-37	ECKD2H101KB	C.CAPACITOR 500V 100P	4	
C1038	ECA1EHG101	E.CAPACITOR 25V 100U	1	
C1039	ECQB1H104JF	P.CAPACITOR 50V 0.1U	1	
D1001	D3SBA60	DIODE	1	
D1003	AP01C	DIODE	1	
D1004	ERA22-02	DIODE	1	
D1005	MA4240-L	DIODE	1	
D1006	MA723	DIODE	1	
D1010	RL4ZP	DIODE	1	
D1011	FMB-24H	DIODE	1	
D1012	31D004	DIODE	1	
D1013	RL2ZP	DIODE	1	
D1014	MA4130L	DIODE	1	
D1016	31D004	DIODE	1	
IC1001	STRM6545	IC	1	
IC1002	UPC1093J	IC	1	
IC1003	AN7912F	IC	1	
J1	VEE0B00	CABLE	1	
L1001	ELF18D602	FILTER	1	
L1002,03	EXCELSA35	COIL	2	
L1010	VLQ0655K220	COIL 22UH	1	
L1011	VLQ0354	COIL	1	
L1012	VLQ0605	COIL	1	

Ref. No.	Part No.	Part Name & Description		Pcs	Remarks
L1013, 14	VLQ0655K220	COIL	22UH	2	
P1001	VJP2639	CONNECTOR (MALE)		1	
P1002, 03	VJP3324	CONNECTOR (MALE)		2	
P1004	VJP1230T	CONNECTOR (MALE)	3P	1	
Q1001	PC111LY1	PHOTO COUPLER		1	
Q1002	2SD1474	TRANSISTOR		1	
R1001	ERU5TEK2R2	F.RESISTOR	5W 2.2	1	
R1003	ERDS2T0	C.RESISTOR	1/4W 0	1	
R1004	ERG3SJ393	M.RESISTOR	3W 39K	1	
R1005-07	ERG1SJ473	M.RESISTOR	1W 47K	3	
R1008	ERDS2FJ221	C.RESISTOR	1/4W 220	1	
R1009, 10	ERDS2FJ271	C.RESISTOR	1/4W 270	2	
R1011	ERW1PKR39	W.RESISTOR	1W 0.39	1	
R1012	ERDS2FJ152	C.RESISTOR	1/4W 1.5K	1	
R1013	ERDS2FJ101	C.RESISTOR	1/4W 100	1	
R1014	ERDS2FJ332	C.RESISTOR	1/4W 3.3K	1	
R1015, 16	ERDS1TJ395	C.RESISTOR	1/2W 3.9M	2	
R1017	ERDS2FJ103	C.RESISTOR	1/4W 10K	1	
R1020	ERDS2TJ681	C.RESISTOR	1/4W 680	1	
R1021	ERG2SJ681	M.RESISTOR	2W 680	1	
R1022	ERG2SJ471	M.RESISTOR	2W 470	1	
R1024	ER0S2CKF1801	M.RESISTOR	1/4W 1.8K	1	
R1025	ER0S2CKF3601	M.RESISTOR	1/4W 3.6K	1	
R1026	ERDS2TJ561	C.RESISTOR	1/4W 560	1	
R1027, 28	ERDS2T0	C.RESISTOR	1/4W 0	2	
R1029	ER0S2CKF4300	M.RESISTOR	1/4W 430	1	
R1031	ERDS2TJ223	C.RESISTOR	1/4W 22K	1	
R1032	ERDS2TJ271	C.RESISTOR	1/4W 270	1	
R1033	ERG2SJ681	M.RESISTOR	2W 680	1	
T1001	VLT0885	TRANSFORMER		1	
TP1001	VJR0646	TEST POINT		1	
VR1001	VRV0112B501	V.RESISTOR	500	1	
		MISCELLANEOUS			
	VJF0496	CLAMPER		1	
	VJF0867	CONNECTOR SPACER		1	
	VMP5282	TRANSISTOR CLIP		1	
	VMZ0965	CAPACITOR COVER		3	
	VSC3434	HEAT SINK		2	
	XTN3+8J	SCREW		1	
	XYN3+K8	SCREW		5	
	VSC4638	HEAT SINK		1	
■ E3	VEP000E6A	MOTHER P.C.BOARD		1	(RTL)
C9101, 02	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9103	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9104	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C9105	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9106, 07	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9108	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9109, 10	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9111	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9112-14	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	3	
C9115	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9116	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C9117	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9118, 19	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9120	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9121	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C9122	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9123-25	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	3	
C9126	ECEA1CGE470	E.CAPACITOR	16V 47U	1	

Ref. No.	Part No.	Part Name & Description		Pcs	Remarks
C9127	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C9128	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9129, 30	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9131	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9132, 33	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9134	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9135, 36	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9137	ECEV1CV470Q	E.CAPACITOR CH 16V	47U	1	
C9138, 39	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9140	ECEV1CV470Q	E.CAPACITOR CH 16V	47U	1	
C9141, 42	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9143	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9144-46	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	3	
C9147	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9148, 49	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9150	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9151, 52	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9153	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9154	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C9155	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9156, 57	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9158	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9159	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C9161	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C9162	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9163, 64	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9165	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9166-68	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	3	
C9169	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9170, 71	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9172	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9173, 74	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9175	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9176	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C9177	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9178, 79	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9180	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9181-83	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	3	
C9184	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9188, 89	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9190, 91	ECEA1CGE470	E.CAPACITOR	16V 47U	2	
C9192-94	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	3	
C9195	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9196, 97	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	2	
C9198	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9199	ECEA1CGE101	E.CAPACITOR	16V 100U	1	
C9200	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C9201	ECEA0JGE471	E.CAPACITOR	6.3V 470U	1	
C9203	ECUM1H272KBN	C.CAPACITOR CH 50V	2700P	1	
C9204	ECUM1H332KBN	C.CAPACITOR CH 50V	3300P	1	
C9205	ECA1VFQ561	E.CAPACITOR	35V 560U	1	
C9210	ECEA1HGE2R2	E.CAPACITOR	50V 2.2U	1	
C9211	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C9212	ECEA1CGE101	E.CAPACITOR	16V 100U	1	
C9213	ECEA1CGE470	E.CAPACITOR	16V 47U	1	
C9251	ECUM1E104ZFN	C.CAPACITOR CH 25V	0.1U	1	
C9252	ECEA1CGE101	E.CAPACITOR	16V 100U	1	
C9253	EEUFC1A102	E.CAPACITOR	10V 100U	1	
C9254	ECUM1H103KBN	C.CAPACITOR CH 50V	0.01U	1	
C9304-06	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	3	
C9501	ECEC1CP123B	E.CAPACITOR	16V 0.012M	1	
D9101, 02	MA3062M	DIODE		2	
D9103	8P2M	DIODE		1	
D9104	MA4030-L	DIODE		1	
D9105-07	M1MA151K	DIODE		3	
D9108	MA701A	DIODE		1	
D9109-15	M1MA151K	DIODE		7	
D9116	SFPB-64	DIODE		1	
D9201	MA115	DIODE		1	
D9202	MA4270	DIODE		1	
D9204	MA115	DIODE		1	
D9205	MA3062M	DIODE		1	
FL9101-16	VLF0931	FILTER		16	

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.

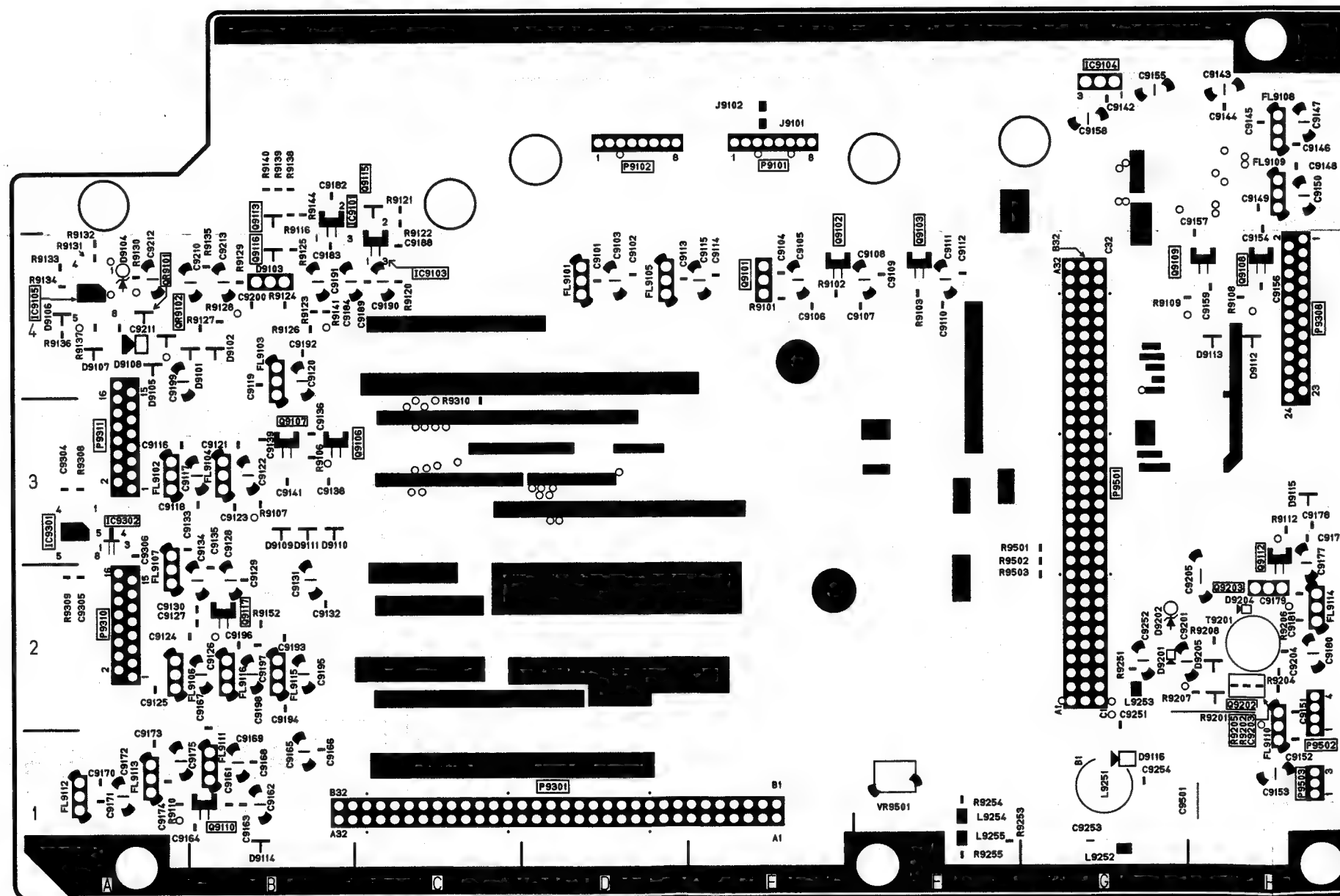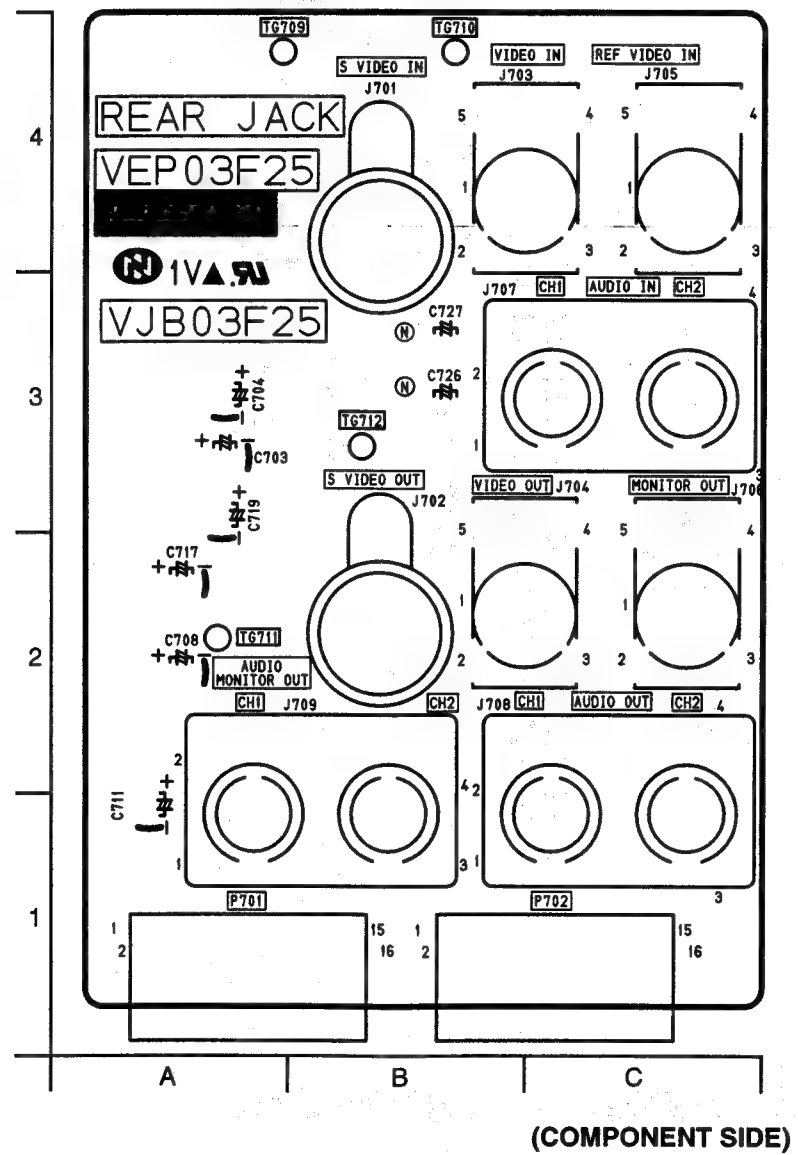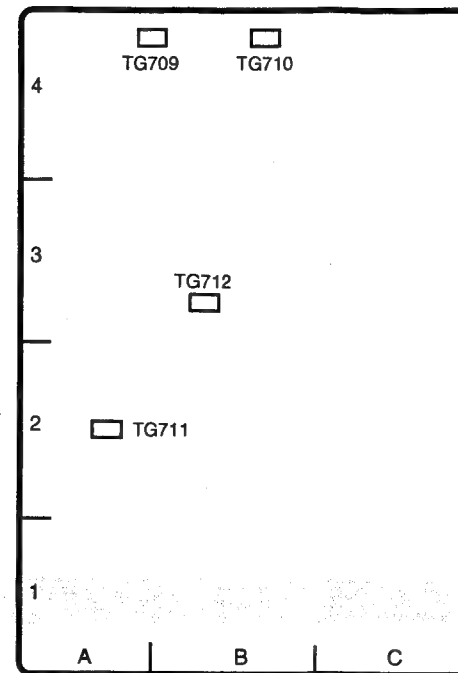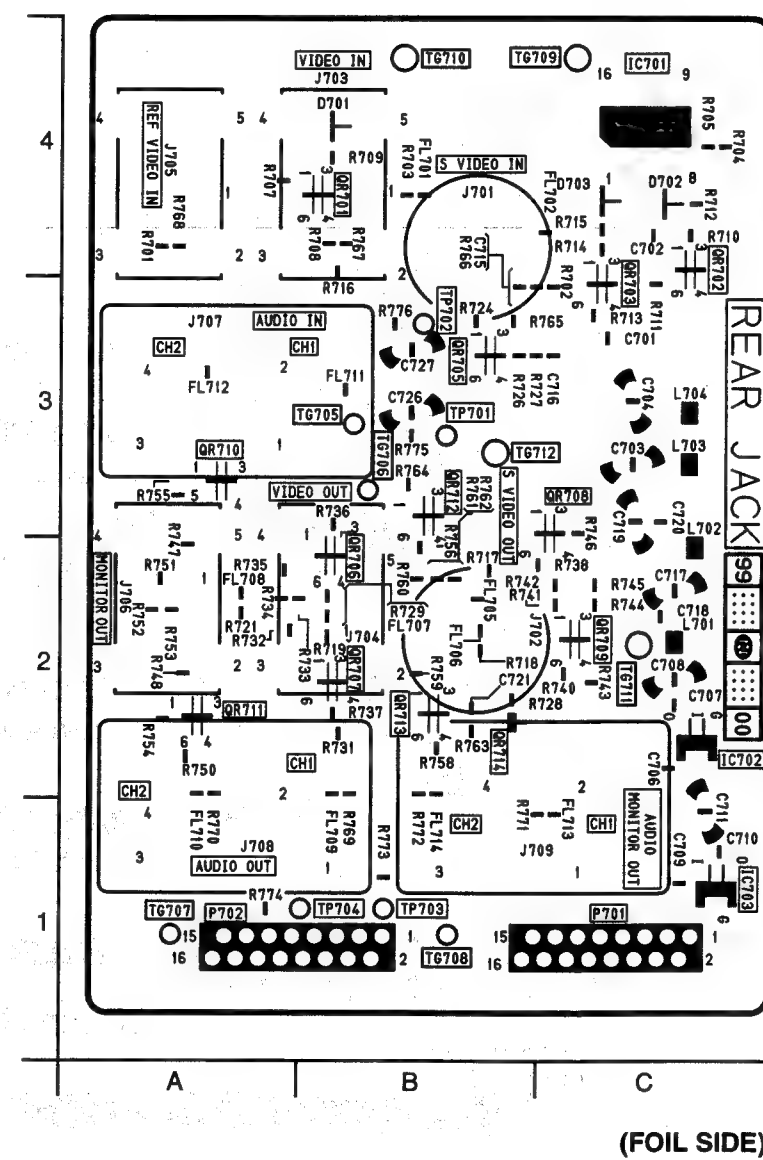| Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC9101	XC62AP5002P	IC	1	
IC9103	XC62DN5002P	IC	1	
IC9104	AN78M09	IC	1	
IC9105	UPC393G2	IC	1	
IC9106	LM2675M-ADJ	IC	1	
IC9301	UPC4558G2	IC	1	
IC9302	TC7SH00F	IC	1	
J9101,02	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	2	
L9251	VLQ0765	COIL	1	
L9252	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
L9253-55	VLQ0319K1R0	COIL 1.0UH	3	
P9101,02	VJS3324	CONNECTOR (FEMALE)	2	
P9301	VJS2898A064P	CONNECTOR (FEMALE)	1	
P9304-07	VJS4064N160	CONNECTOR	4	
P9308	VJS3537B024G	CONNECTOR (FEMALE)	1	
P9310,11	VJS3600F016K	CONNECTOR (FEMALE)	2	
P9312	VJS4064N160	CONNECTOR	1	
P9501	VJS2899A096	CONNECTOR (FEMALE)	1	
P9502	VJP1231T	CONNECTOR (MALE) 4P	1	
P9503	VJP1230T	CONNECTOR (MALE) 3P	1	
P9504,05	VJP3949C070H	CONNECTOR (MALE)	2	
Q9101	2SD2136-Q	TRANSISTOR	1	
Q9102,03	2SB1073-R	TRANSISTOR	2	
Q9106-10	2SD1119-R	TRANSISTOR	5	
Q9112	2SD1119-R	TRANSISTOR	1	
Q9113	2SB709A-R	TRANSISTOR	1	
Q9115	2SD601A-R	TRANSISTOR	1	
Q9116	2SB709A-R	TRANSISTOR	1	
Q9117	2SD1119-R	TRANSISTOR	1	
Q9202	2SD601A-R	TRANSISTOR	1	
Q9203	2SC3074Y	TRANSISTOR	1	
QR9101	UN2113	TRANSISTOR-RESISTOR	1	
QR9102	UN2211	TRANSISTOR-RESISTOR	1	
R9101	ERJ6GEYJ4R7	M.RESISTOR CH 1/10W 4.7K	1	
R9102,03	ERJ6GEYG560	M.RESISTOR CH 1/10W 56	2	
R9106-10	ERJ6GEYG560	M.RESISTOR CH 1/10W 56	5	
R9112	ERJ6GEYG560	M.RESISTOR CH 1/10W 56	1	
R9116	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
R9120	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R9121	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R9122	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R9123	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	1	
R9124	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R9125	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R9126	ERJ6GEYJ820	M.RESISTOR CH 1/10W 82	1	
R9127,28	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R9129	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R9130	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R9131	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R9132-37	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	6	
R9138-40	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	3	
R9141	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R9144	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
R9152	ERJ6GEYG560	M.RESISTOR CH 1/10W 56	1	
R9201	ERQ12HJ1R0P	F.RESISTOR 1/2W 1	1	
R9202	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R9204,05	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
R9206	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
R9207	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R9208	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R9252	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R9253	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R9308,09	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
T9201	VLT0889	TRANSFORMER	1	
TG9251	EYF6CU	TEST POINT	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
TP9251	EYF6CU	TEST POINT	1	
VR9251	EVM7JGA00B13	V.RESISTOR 1K	1	
VR9501	EVMEASA00B54	V.RESISTOR 50K	1	
		MISCELLANEOUS		
	VKC0295	BOARD SPACER	1	
■ E4	VEP03E32B	TBC P.C.BOARD	1	(RTL)
C3001	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3002-05	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3006	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C3007,08	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C3009	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C3010	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3011	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3012	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3013	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C3014-17	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3018	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3019,20	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3021,22	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	2	
C3023,24	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3025	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3026	ECUX1E681JCV	C.CAPACITOR CH 25V 680P	1	
C3028-30	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3031	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C3032	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3033	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3034	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3035	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C3036,37	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3038	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3039	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C3041	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3043	ECUX1H331JCV	C.CAPACITOR CH 50V 330P	1	
C3044-46	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3047	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C3048-50	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3051	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3054,55	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	2	
C3056	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3057	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3058	ECUX1H060DCV	C.CAPACITOR CH 50V 6P	1	
C3060,61	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3101-17	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	17	
C3201-09	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C3210	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3211	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3212	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3214	ECUX1H331JCV	C.CAPACITOR CH 50V 330P	1	
C3216-22	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C3223	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1	
C3224,25	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3226	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1	
C3227	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3229	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3230,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3232	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3233	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3234	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3235,36	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3237,38	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	2	
C3239-41	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3242	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3244-47	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3301-17	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	17	
C3318,19	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3320	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1		C3608,09	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3321	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1		C3610	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3322,23	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2		C3611	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3324	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1		C3612	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3325-30	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6		C3613	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3331	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1		C3614	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3332	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1		C3616	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3333-35	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3		C3617	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3401	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1		C3618	ECEV1EN220Q	E.CAPACITOR CH 25V 22U	1	
C3402-07	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6		C3619-23	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3408	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1						
C3409-30	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	22		D3001	MA142WK	DIODE	1	
C3431	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1		D3002	MA335-R	DIODE	1	
C3501	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1		D3201	MA715	DIODE	1	
C3502	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1		D3202,03	MA152K	DIODE	2	
C3503-06	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4		D3204	MA335-R	DIODE	1	
C3507	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1		D3501	MA142WK	DIODE	1	
C3508-10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3		D3502	MA142K	DIODE	1	
C3511	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1		D3503,04	MA152K	DIODE	2	
C3512	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1		D3505,06	MA142K	DIODE	2	
C3513-16	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	4		D3507	MA335-R	DIODE	1	
C3517	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1		D3508	MA152K	DIODE	1	
C3518	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1						
C3519	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1		FL3001-09	VLF0941C223	FILTER	9	
C3520	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1		FL3011	VLQ0415	COIL	1	
C3521,22	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	2		FL3301-04	VLF0941C223	FILTER	4	
C3523,24	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2		FL3501-06	VLF0941C223	FILTER	6	
C3525-28	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4						
C3529	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1		IC3001	NJM78L09UA	IC	1	
C3530,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2		IC3002	XC62AP5002P	IC	1	
C3532	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1		IC3003	NJM79L09UA	IC	1	
C3533	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1		IC3004	XC62DN5002P	IC	1	
C3534	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1		IC3005	TC7S14F	IC	1	
C3535	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1		IC3006,07	DM74LS221SJ	IC	2	
C3536	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1		IC3008	TVHC74FT	IC	1	
C3537,38	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2		IC3009	NJM082BV	IC	1	
C3539	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1		IC3010	TC4W53FU	IC	1	
C3540	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1		IC3011	TC7S00FU	IC	1	
C3541,42	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2		IC3012	TVHC244FT	IC	1	
C3543	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1		IC3013	TC7S04FU	IC	1	
C3544	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1		IC3014	TC7SH00FU	IC	1	
C3545	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1		IC3101-03	TVHC244FT	IC	3	
C3546-48	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3		IC3104	T160G70-1601	IC	1	
C3549	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1		IC3105	TVHC04FT	IC	1	
C3551	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1		IC3106	TVHC244FT	IC	1	
C3552,53	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2		IC3107,08	UPD42280G3	IC	2	
C3554,55	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	2		IC3109,10	TVHC244FT	IC	2	
C3556-58	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3		IC3201	TVHC257FT	IC	1	
C3559	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1		IC3202	TVHC244FT	IC	1	
C3560	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1		IC3203	TC4W53FU	IC	1	
C3561	ECUX1H561JCV	C.CAPACITOR CH 50V 560P	1		IC3204	UPD65841G025	IC	1	
C3562	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1		IC3205	TVHT244FT	IC	1	
C3563-66	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4		IC3206	TVHC244FT	IC	1	
C3567	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1		IC3207	TC7SH32FU	IC	1	
C3568	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1		IC3208	MC74HC125AF	IC	1	
C3569	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1		IC3209,1C	TC7S66F	IC	2	
C3570	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1		IC3211,12	NJM082BV	IC	2	
C3573,74	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2		IC3213	TC7SH08FU	IC	1	
C3575	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1		IC3214	TC7SH00FU	IC	1	
C3576,77	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2		IC3215,16	TVHC244FT	IC	2	
C3578	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1		IC3217	TVHC163FT	IC	1	
C3579-82	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4		IC3301	TVHC164FT	IC	1	
C3583	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1		IC3302-04	TVHC244FT	IC	3	
C3584	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1		IC3305	TC7S32F	IC	1	
C3585	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1		IC3306	TVHC244FT	IC	1	
C3586	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1		IC3307	T160G70-1601	IC	1	
C3587	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1		IC3308	XC62AP5002P	IC	1	
C3588-92	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5		IC3309	XC62DN5002P	IC	1	
C3593	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1		IC3310-13	UPD42280G3	IC	4	
C3594-96	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3		IC3314,15	TVHC244FT	IC	2	
C3597	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1		IC3401	TVHC244FT	IC	1	
C3599	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1		IC3402	UPD65840G024	IC	1	
C3600-05	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6		IC3403	TC7SH04FU	IC	1	
C3606	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1		IC3404	TVHC74FT	IC	1	
C3607	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1		IC3405	TVHC244FT	IC	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC3406	ADV7122KST50	IC	1		R3032	ERJ3RBD152	M.RESISTOR CH 1/16W 1.5K	1	
IC3407	AD589JR	IC	1		R3034	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
IC3501	NJM78L09UA	IC	1		R3035	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
IC3502	XC62AP5002P	IC	1		R3036,37	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
IC3503	XC62DN5002P	IC	1		R3038-47	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	10	
IC3504	T74VHCT244F	IC	1		R3101-26	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	26	
IC3505	AN91A12S	IC	1		R3127-29	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
IC3506	MM74HC221AM	IC	1		R3131	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
IC3507	TC74VHC221AF	IC	1		R3133	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
IC3508	TVHC04FT	IC	1		R3135	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
IC3509	NE521D	IC	1		R3143	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
IC3510	TC7SH00FU	IC	1		R3145	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
IC3511	NJM082BV	IC	1		R3146	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
IC3512	MC74HC125AF	IC	1		R3148	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
IC3513	NJM082BV	IC	1		R3149-60	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	12	
IC3514	TC74VHC221AF	IC	1		R3161,62	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
IC3515	NJM084V	IC	1		R3163-66	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
IC3516	TC7SH00FU	IC	1		R3167-69	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
IC3517	NJM084V	IC	1		R3201-12	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	12	
IC3518	TC7SH00FU	IC	1		R3213-15	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
IC3519	TVHC08FT	IC	1		R3218,19	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
IC3520	TVHC04FT	IC	1		R3220-23	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
IC3521	TVHC244FT	IC	1		R3224	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
IC3522	MM74HC221AM	IC	1		R3225	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
IC3523	NE521D	IC	1		R3227	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
IC3524	MC14053BF	IC	1		R3228,29	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
IC3525	NJM082BV	IC	1		R3230	ERJ3RBD123	M.RESISTOR CH 1/16W 12K	1	
IC3526	TC7SH00FU	IC	1		R3232	ERJ6RBD273	M.RESISTOR CH 1/10W 27K	1	
IC3527	UPD65650J203	IC	1		R3233	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
IC3528	NJM082BV	IC	1		R3234	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
IC3529	TC4S66F	IC	1		R3235,36	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
					R3239	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
L3001	VLQ0163J3R3	COIL 3.3UH	1		R3240	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
L3101-16	VLP0155	COIL	16		R3241	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
L3201	VLQ0163J3R9	COIL 3.9UH	1		R3242	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
L3202	VLQ0319K470	COIL 47UH	1		R3245	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
L3501	VLQ0163J221	COIL 220UH	1		R3246	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
L3502	VLQ0163J680	COIL 68UH	1		R3248	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
L3503	VLQ0163J221	COIL 220UH	1		R3249,50	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
					R3251	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
P3902	VJS3826A040	CONNECTOR (FEMALE)	1		R3252	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
P3981	VJP4064Q160	CONNECTOR (MALE)	1		R3253-55	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
					R3257	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
Q3001	2SC3938-R	TRANSISTOR	1		R3258	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
Q3002,03	2SA1532-B	TRANSISTOR	2		R3259	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
Q3004	2SC3938-R	TRANSISTOR	1		R3260	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
Q3201	2SC2295-C	TRANSISTOR	1		R3261	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
Q3401	2SK374-R	TRANSISTOR	1		R3262	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
Q3402-04	2SB1218A-R	TRANSISTOR	3		R3263	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
Q3501	2SB709A-R	TRANSISTOR	1		R3264	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
Q3502,03	2SK608-R	TRANSISTOR	2		R3265-67	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
Q3504	XN4601	TRANSISTOR-RESISTOR	1		R3268,69	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
					R3270	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3001-03	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3		R3271	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3004	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3272,73	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3005	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1		R3274	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3006	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1		R3275-84	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	10	
R3007	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R3285	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3008	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1		R3286	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3009	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1		R3287	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3010	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		R3301	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3011	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1		R3303,04	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3012,13	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2		R3306,07	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3014	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R3309	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3015	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1		R3311-33	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	23	
R3016,17	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	2		R3334-37	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R3018	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R3341-43	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3020	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R3344,45	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3021	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1		R3346	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3022	ERJ3RBD273	M.RESISTOR CH 1/16W 27K	1		R3347	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3023	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R3348	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3024	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1		R3350	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3028,29	ERJ3RBD392	M.RESISTOR CH 1/16W 3.9K	2		R3401-05	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	5	
R3030	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R3406	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3031	ERJ3RBD104	M.RESISTOR CH 1/16W 100K	1		R3407	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3409	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3410	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3413	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3415	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3417	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3420,21	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3423,24	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3426	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3428,29	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3431	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3434	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3435-40	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	6	
R3441	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R3442	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1	
R3444,45	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2	
R3446-51	ERJ3RBD201	M.RESISTOR CH 1/16W 200	6	
R3452,53	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3454,55	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R3456,57	ERJ3RED750	M.RESISTOR CH 1/16W 75	2	
R3458	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3459	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3460	ERJ3RED750	M.RESISTOR CH 1/16W 75	1	
R3461	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3462,63	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3464	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3465	ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R3501-03	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	3	
R3505	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3508	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3509	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3511-14	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R3515,16	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3517	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R3518	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R3519,20	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R3521	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R3522	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R3523	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3524	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R3525	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3526	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R3527	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3528	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R3529	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3530	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3531	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R3532	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3533	ERJ3RBD393	M.RESISTOR CH 1/16W 39K	1	
R3534	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1	
R3535	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R3536	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R3537	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R3538	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3539	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R3540	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3541	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R3542	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3543	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3544	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3545	ERJ3RBD272	M.RESISTOR CH 1/16W 2.7K	1	
R3546	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3547	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1	
R3548	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R3549	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3551	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R3554	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1	
R3557	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R3560	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R3561	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3563	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R3564	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3565	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3566	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R3567	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3568	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3569	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1	
R3570	ERJ3RBD393	M.RESISTOR CH 1/16W 39K	1	
R3571	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3572	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3573,74	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3575	ERJ3RBD563	M.RESISTOR CH 1/16W 56K	1	
R3576	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R3577	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3578	ERJ3RBD392	M.RESISTOR CH 1/16W 3.9K	1	
R3579,80	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R3581	ERJ3RBD152	M.RESISTOR CH 1/16W 1.5K	1	
R3582	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R3583	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3584	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3589	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R3591	ERJ3RBD104	M.RESISTOR CH 1/16W 100K	1	
R3592	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3593-97	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	5	
R3598	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3599	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3601,02	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3603	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3604	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R3605	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3606	ERJ3RBD123	M.RESISTOR CH 1/16W 12K	1	
R3608	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R3609	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1	
R3610	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3612,13	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3615	ERJ3RBD123	M.RESISTOR CH 1/16W 12K	1	
R3616,17	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3620	ERJ3RBD123	M.RESISTOR CH 1/16W 12K	1	
R3622	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3623,24	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3625	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3626-28	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3630-32	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3634	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R3636	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3637	ERJ3RBD823	M.RESISTOR CH 1/16W 82K	1	
R3638	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3639	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3641	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3642	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R3644,45	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3646	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3647,48	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3649	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3650	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1	
R3651	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R3653	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3654	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3655	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3658,59	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R3660	ERJ3RBD152	M.RESISTOR CH 1/16W 1.5K	1	
R3661,62	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R3663	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3665	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3666	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3669	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R3670	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3671	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3672	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3673	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3674	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R3675,76	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3901,02	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3904-08	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	5	
TG3003	EYF6CU	TEST POINT	1	
TG3201	EYF6CU	TEST POINT	1	
TG3401	EYF6CU	TEST POINT	1	
TG3501,02	EYF6CU	TEST POINT	2	
TP3001,02	EYF6CU	TEST POINT	2	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
TP3004	EYF6CU	TEST POINT	1	
TP3201-03	EYF6CU	TEST POINT	3	
TP3501-07	EYF6CU	TEST POINT	7	
VC3201	ECV1ZW50X53T	TRIMMER	1	
VC3501	ECV1ZW20X53T	TRIMMER	1	
VR3001	EVM7JGA00B23	V.RESISTOR 2K	1	
VR3501	EVM7JGA00B14	V.RESISTOR 10K	1	
VR3504	EVM7JGA00B53	V.RESISTOR 5K	1	
VR3507	EVM7JGA00B54	V.RESISTOR 50K	1	
VR3508	EVM7JGA00B23	V.RESISTOR 2K	1	
X3201	VSX0789	CRYSTAL OSCILLATOR	1	
X3501,02	VSX0567A	CRYSTAL OSCILLATOR	2	
X3503	VSX0338	CRYSTAL OSCILLATOR	1	
X3504	VSX0081	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	XYN2+J6	SCREW	2	
■ E5	VEP03F00A	DIGITAL CORE P.C.BOARD	1	(RTL)
C3002	ECEV0GV470Q	E.CAPACITOR CH 4V 47U	1	
C3003,04	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3005	VCK0151	C.CAPACITOR	1	
C3006	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3009,10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3015-17	VCK0152	C.CAPACITOR	3	
C3018	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3101	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3102	VCK0151	C.CAPACITOR	1	
C3103	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3104,05	VCK0151	C.CAPACITOR	2	
C3106,07	VCK0152	C.CAPACITOR	2	
C3108-12	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3113	VCK0151	C.CAPACITOR	1	
C3114	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C3115	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3116	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3117	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C3118	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3119	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C3120	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C3121,22	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3123	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3124	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C3125	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3126	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C3127-31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3132	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C3133	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3134	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C3201-03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3205	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3206	VCK0151	C.CAPACITOR	1	
C3207	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3209	VCK0152	C.CAPACITOR	1	
C3210	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3211	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3301	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C3302	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C3303	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3304	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C3305,06	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C3307	VCK0152	C.CAPACITOR	1	
C3308	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3309,10	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	2	
C3311-13	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3315-17	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3319-25	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C3402,03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3405-09	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3411	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3412	VCK0151	C.CAPACITOR	1	
C3413-21	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C3501-13	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	13	
C3601,02	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3603,04	ECUX1H681JV	C.CAPACITOR CH 50V 680P	2	
C3605-07	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C3608	ECEV1HVR330	E.CAPACITOR CH 50V 0.33U	1	
C3609	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3610	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3611	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3612	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C3613	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3616	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3618,19	VCK0152	C.CAPACITOR	2	
C3706,07	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3719	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3720	VCK0151	C.CAPACITOR	1	
C3721	VCK0152	C.CAPACITOR	1	
C3722,23	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3725,26	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3801-05	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3901	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3902	VCK0151	C.CAPACITOR	1	
C3903-10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	8	
C3951-54	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
D3601-03	MA715	DIODE	3	
D3604-06	M1MA152K	DIODE	3	
FL1	VLF1116	FILTER	1	
FL2	VLF1118	FILTER	1	
FL3	VLF1117	FILTER	1	
IC3001	MN67372A2	IC	1	
IC3002	MN4706F	IC	1	
IC3003	XC62AP2302P	IC	1	
IC3007	TVHC244FT	IC	1	
IC3008	TC7SH32FU	IC	1	
IC3101	M65401FP	IC	1	
IC3102	MN673711	IC	1	
IC3103-06	TVHC245FT	IC	4	
IC3107	M52660FP	IC	1	
IC3108	TVHC244FT	IC	1	
IC3110	TC4W53FU	IC	1	
IC3111	TVHC244FT	IC	1	
IC3112	TVHC257FT	IC	1	
IC3202	XC62AP3202P	IC	1	
IC3203	TC7S66F	IC	1	
IC3204	MB81V4260S7	IC	1	
IC3205	L7A1433	IC	1	
IC3206	TVHC74FT	IC	1	
IC3207,08	TC7SH08FU	IC	2	
IC3301	XC62DN5002P	IC	1	
IC3302	MC10H125M	IC	1	
IC3304	L7A1434	IC	1	
IC3305,06	TVHC74FT	IC	2	
IC3308	TVHC153FT	IC	1	
IC3310	MC10H124M	IC	1	
IC3311	TVHC244FT	IC	1	
IC3315,16	TC7SH04FU	IC	2	
IC3317	TC7SH08FU	IC	1	
IC3401	UPD65868D022	IC	1	
IC3403	TVHC245FT	IC	1	
IC3404	TVHC244FT	IC	1	
IC3405	TC7SH32FU	IC	1	
IC3415	TVHC257FT	IC	1	
IC3416	TC7SH04FU	IC	1	
IC3417	TC7S66F	IC	1	
IC3419	TC7SH04FU	IC	1	
IC3420	TC7SH00FU	IC	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC3421,22	TC4W53FU	IC	2	
IC3501,02	SN74S1051NS	IC	2	
IC3503	TVHT541FT	IC	1	
IC3504	HD151015	IC	1	
IC3505	TVHT541FT	IC	1	
IC3507,08	UPD71055GB	IC	2	
IC3509	TVHC244FT	IC	1	
IC3510	TVHC08FT	IC	1	
IC3511	TVHC138FT	IC	1	
IC3512	TC7SH04FU	IC	1	
IC3513	TC7SH08FU	IC	1	
IC3601,02	TC7S66F	IC	2	
IC3603	VSI2891	IC	1	
IC3605	S80727ANDQ	IC	1	
IC3606	TC7SH08FU	IC	1	
IC3704,05	TVHC244FT	IC	2	
IC3713,14	TVHC244FT	IC	2	
IC3718,19	TC7SH32FU	IC	2	
IC3801	UPD65843G026	IC	1	
IC3802	TVHC74FT	IC	1	
IC3901	TVHC74FT	IC	1	
IC3902	TVHC244FT	IC	1	
IC3905,06	TVHC244FT	IC	2	
IC3907	TC4W53FU	IC	1	
IC3908	TC7SH08FU	IC	1	
IC3951~54	TVHC244FT	IC	4	
L3001	VLP0145	COIL	1	
L3101	VLP0145	COIL	1	
L3102~04	VLQ0319K100	COIL 10UH	3	
L3401	VLP0145	COIL	1	
L3601	VLQ0319K470	COIL 47UH	1	
L3602,03	VLQ0464K6R8	COIL 6.8UH	2	
L3604	VLP0155	COIL	1	
L3701	VLP0145	COIL	1	
L3702	VLQ0464K6R8	COIL 6.8UH	1	
L3703~18	VLP0155	COIL	16	
L3901	VLP0145	COIL	1	
P3981	VJP4064Q160	CONNECTOR (MALE)	1	
P3982	VJS3826A040	CONNECTOR (FEMALE)	1	
Q3601	2SB709A-R	TRANSISTOR	1	
QR3601	UN2214	TRANSISTOR-RESISTOR	1	
R3001	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3024	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3070	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3071~78	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	8	
R3107~15	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	9	
R3118,19	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3120,21	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3122,23	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3124,25	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3126~34	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	9	
R3135~45	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	11	
R3147	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3148	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3153	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3154	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3155	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3156	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3157	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R3159	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3160	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3161	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3165~75	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	11	
R3176	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3177	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3179~82	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R3183~96	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	14	
R3203	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3207	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3208	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3301	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R3302	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3304~08	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	5	
R3316	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3320	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3321,22	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3323	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3324,25	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	2	
R3326~29	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	4	
R3332	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3334,35	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3336	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R3339	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3340,41	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R3401,02	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3403	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3414,15	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3416,17	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3418	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3419,20	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3421	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3422	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3423~25	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R3505,06	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3507,08	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3509~16	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	8	
R3517~19	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R3520	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3521	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3523~38	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	16	
R3539~41	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R3542	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3601~03	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R3610,11	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3614	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3615,16	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R3617,18	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3620,21	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3623,24	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3625	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3626,27	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3629	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3630~32	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3633	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3634	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3635	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3636	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3637	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3638	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3639	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3640~42	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3643	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3644~46	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R3648	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3649	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3651	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3652	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3653	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3656	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3657	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3658~60	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3662	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3672	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3674,75	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3677	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3701~16	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	16	
R3722~38	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	17	
R3739~54	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	16	
R3755~70	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	16	
R3772	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3773	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3802	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3805	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3806	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3812~17	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	6	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3901-06	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	6	
R3907	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3909-15	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	7	
R3919-21	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	3	
R3923	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3925	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3926	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3927	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3951-53	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3956-61	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	6	
R3962,63	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3964	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3965-67	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	3	
R3981,82	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3984-88	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	5	
SW3101	VSS0367-04B	SWITCH	1	
SW3102	VSS0367-08B	SWITCH	1	
TG3001	EYF6CU	TEST POINT	1	
TG3302	EYF6CU	TEST POINT	1	
TP3002-04	EYF6CU	TEST POINT	3	
TP3103,04	EYF6CU	TEST POINT	2	
TP3201,02	EYF6CU	TEST POINT	2	
TP3301	EYF6CU	TEST POINT	1	
TP3304-07	EYF6CU	TEST POINT	4	
TP3601-04	EYF6CU	TEST POINT	4	
TP3801,02	EYF6CU	TEST POINT	2	
TP3901	EYF6CU	TEST POINT	1	
TP3951	EYF6CU	TEST POINT	1	
VR3101-03	VRV0161B203	V.RESISTOR 20K	3	
X3301	VSX0645	CRYSTAL OSCILLATOR	1	
X3601	VSX0637	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	XYN2+J6	SCREW	2	
■ E6	VEP03F01A	VIDEO I/O P.C.BOARD	1	(RTL)
C30201	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30202	ECEV0JN470Q	E.CAPACITOR CH6.3V 47U	1	
C30203	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30204	ECEV1AV330Q	E.CAPACITOR CH 10V 33U	1	
C30205	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30206	ECST1CX106Z	T.CAPACITOR CH 16V 10U	1	
C30207	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30208	ECEV1AV330Q	E.CAPACITOR CH 10V 33U	1	
C30209	ECST1CX106Z	T.CAPACITOR CH 16V 10U	1	
C30210	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30211	ECEV1AV330Q	E.CAPACITOR CH 10V 33U	1	
C30212	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30213	ECST1CX106Z	T.CAPACITOR CH 16V 10U	1	
C30214	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30215	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30217	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30218	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C30219	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C30220	ECUM1C474KBM	C.CAPACITOR CH 16V 0.47U	1	
C30221,22	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C30223	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C30224-26	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C30227	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30228	ECUX1A105KBN	C.CAPACITOR CH 10V 1U	1	
C30229	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30230,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C30232	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C30233-36	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C30237	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30238	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30239	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30240	ECEV1AV330Q	E.CAPACITOR CH 10V 33U	1	
C30241	ECEV1HV4R7Q	E.CAPACITOR CH 50V 4.7U	1	
C30242	ECHU1C392JB	P.CAPACITOR 16V 3900P	1	
C30243	ECUX1H821JCV	C.CAPACITOR CH 50V 820P	1	
C30244	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30245	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C30246	ECHU1H152JB	P.CAPACITOR 50V 1500P	1	
C30247	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C30248	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30249	ECST1CX106Z	T.CAPACITOR CH 16V 10U	1	
C30250	ECUM1C334KBM	C.CAPACITOR CH 16V 0.33U	1	
C30251	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C30252	ECST1CX106Z	T.CAPACITOR CH 16V 10U	1	
C30253	ECHU1C683JB5	P.CAPACITOR 16V 0.068U	1	
C30254	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C30255	ECUX1H561JCV	C.CAPACITOR CH 50V 560P	1	
C30256	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30257,58	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C30259	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C30260,61	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	2	
C30262	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C30263	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30264	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C30265	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1	
C30266	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C30267	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1	
C30268	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30269	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C30270	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30301	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30303	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C30304	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C30305,06	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C30307	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C30308,09	ECST1CX106Z	T.CAPACITOR CH 16V 10U	2	
C30310,11	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C30312	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1	
C30314	ECEV0JN470Q	E.CAPACITOR CH6.3V 47U	1	
C30318	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30323	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30324	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C30325	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30327	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30330,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C30339	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C30340	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30341	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C30343	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C30344	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C30345,46	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C30401	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30403	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C30405-07	ECEV1AV330Q	E.CAPACITOR CH 10V 33U	3	
C30409-11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C30413-17	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C30420,21	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C30422,23	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	2	
C30424	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C30425,26	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	2	
C30427,28	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C30501-03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C30504-07	ECST1CX106Z	T.CAPACITOR CH 16V 10U	4	
C30509	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30511	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30512	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C30519-21	ECST1CX106Z	T.CAPACITOR CH 16V 10U	3	
C30522	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C30523	ECST1CX106Z	T.CAPACITOR CH 16V 10U	1	
C30524-26	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	3	
C30527-29	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C30530-32	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	3	

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Ref. No.	Part No.	Part Name & Description		Pcs	Remarks
C30533-35	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C30536-41	ECUX1H103KBV	C.CAPACITOR CH 50V	0.01U	6	
C30542-44	ECUX1H102JCV	C.CAPACITOR CH 50V	1000P	3	
C30545-50	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	6	
C30551	ECST1CX106Z	T.CAPACITOR CH 16V	10U	1	
C30552-54	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C30601	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C30602	ECEV1HV4R70	E.CAPACITOR CH 50V	4.7U	1	
C30603,04	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C30605	ECUX1H102JCV	C.CAPACITOR CH 50V	1000P	1	
C30606,07	ECST1CX106Z	T.CAPACITOR CH 16V	10U	2	
C30608	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30609,10	ECST1CX106Z	T.CAPACITOR CH 16V	10U	2	
C30611-13	ECUX1H103KBV	C.CAPACITOR CH 50V	0.01U	3	
C30614	ECST1CX106Z	T.CAPACITOR CH 16V	10U	1	
C30615	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30616	ECUX1H103KBV	C.CAPACITOR CH 50V	0.01U	1	
C30617,18	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C30619	ECEV1AV330Q	E.CAPACITOR CH 10V	33U	1	
C30620	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30621	ECUX1H222KBV	C.CAPACITOR CH 50V	2200P	1	
C30622	ECUX1H103KBV	C.CAPACITOR CH 50V	0.01U	1	
C30623	ECUX1H221JCV	C.CAPACITOR CH 50V	220P	1	
C30624	ECUX1H390JCV	C.CAPACITOR CH 50V	39P	1	
C30625	ECUX1H103KBV	C.CAPACITOR CH 50V	0.01U	1	
C30626	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30627	ECUX1H222KBV	C.CAPACITOR CH 50V	2200P	1	
C30628	ECUX1H103KBV	C.CAPACITOR CH 50V	0.01U	1	
C30629	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30630	ECUX1H471JCV	C.CAPACITOR CH 50V	470P	1	
C30631	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	1	
C30632	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30633,34	ECST1CX106Z	T.CAPACITOR CH 16V	10U	2	
C30635,36	ECUX1H180JCV	C.CAPACITOR CH 50V	18P	2	
C30637	ECUX1H103KBV	C.CAPACITOR CH 50V	0.01U	1	
C30638	ECUX1H560JCV	C.CAPACITOR CH 50V	56P	1	
C30639	ECUM1C474KBM	C.CAPACITOR CH 16V	0.47U	1	
C30640	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30641	ECEV1AV330Q	E.CAPACITOR CH 10V	33U	1	
C30642	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30646	ECUX1H103KBV	C.CAPACITOR CH 50V	0.01U	1	
C30701-04	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	4	
C30801	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30803,04	ECST1CX106Z	T.CAPACITOR CH 16V	10U	2	
C30805-10	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	6	
C30811	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	1	
C30812	ECUX1H470JCV	C.CAPACITOR CH 50V	47P	1	
C30813	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C30815	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30816,17	ECUM1C474KBM	C.CAPACITOR CH 16V	0.47U	2	
C30818	ECUX1H151JCV	C.CAPACITOR CH 50V	150P	1	
C30819	ECUX1H102JCV	C.CAPACITOR CH 50V	1000P	1	
C30820	ECUX1H151JCV	C.CAPACITOR CH 50V	150P	1	
C30821	ECUX1H102JCV	C.CAPACITOR CH 50V	1000P	1	
C30822-24	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C30825	ECUX1H020CCV	C.CAPACITOR CH 50V	2P	1	
C30826	ECUX1H121JCV	C.CAPACITOR CH 50V	120P	1	
C30827	ECUM1C105ZFN	C.CAPACITOR CH 16V	1U	1	
C30828	ECUX1H020CCV	C.CAPACITOR CH 50V	2P	1	
C30829-32	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	4	
C30833	ECUX1H470JCV	C.CAPACITOR CH 50V	47P	1	
C30834	ECUX1H180JCV	C.CAPACITOR CH 50V	18P	1	
C30835	ECUX1H470JCV	C.CAPACITOR CH 50V	47P	1	
C30836	ECUX1H121JCV	C.CAPACITOR CH 50V	120P	1	
C30837	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	1	
C30838	ECUX1H560JCV	C.CAPACITOR CH 50V	56P	1	
C30839-41	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C30842	ECUX1H470JCV	C.CAPACITOR CH 50V	47P	1	
C30843	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30844,45	ECST1CX106Z	T.CAPACITOR CH 16V	10U	2	
C30846,47	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C30848	ECEV1CV100Q	E.CAPACITOR CH 16V	10U	1	
C30849	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30851	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30901-04	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	4	
C30905,06	ECST1CX106Z	T.CAPACITOR CH 16V	10U	2	
C30907-09	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C30910	ECST1CX106Z	T.CAPACITOR CH 16V	10U	1	
C30911,12	ECEV1CV100Q	E.CAPACITOR CH 16V	10U	2	
C30913,14	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C30915,16	ECEV0JN100Q	E.CAPACITOR CH6.3V	10U	2	
C30917	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C30918,19	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	2	
C30922,23	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C30926,27	ECUX1H470JCV	C.CAPACITOR CH 50V	47P	2	
C30928,29	ECEV1CV100Q	E.CAPACITOR CH 16V	10U	2	
C30930,31	ECUM1E473KBN	C.CAPACITOR CH 25V	0.047U	2	
C30932,33	ECST1CX106Z	T.CAPACITOR CH 16V	10U	2	
C30934-38	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	5	
C30939	ECST1CY105Z	T.CAPACITOR CH 16V	1U	1	
C30940	ECUM1E473KBN	C.CAPACITOR CH 25V	0.047U	1	
C30941,42	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C30943,44	ECEV0JV330Q	E.CAPACITOR CH6.3V	33U	2	
C30945,46	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C30948	ECUX1H330JCV	C.CAPACITOR CH 50V	33P	1	
C30949	ECUX1H271JCV	C.CAPACITOR CH 50V	270P	1	
C30950	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	1	
C30952	ECUX1H680JCV	C.CAPACITOR CH 50V	68P	1	
C30953	ECUX1H121JCV	C.CAPACITOR CH 50V	120P	1	
C30954	ECUX1H100DCV	C.CAPACITOR CH 50V	10P	1	
C30957-59	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C30960	ECUM1C105ZFN	C.CAPACITOR CH 16V	1U	1	
C30961	ECUX1H470JCV	C.CAPACITOR CH 50V	47P	1	
C30962	ECUX1H103KBV	C.CAPACITOR CH 50V	0.01U	1	
C30963	ECUX1H050CCV	C.CAPACITOR CH 50V	5P	1	
C30964	ECUX1H390JCV	C.CAPACITOR CH 50V	39P	1	
C30965	ECUX1H150JCV	C.CAPACITOR CH 50V	15P	1	
C31001	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C31002	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C31003	ECUX1H221JCV	C.CAPACITOR CH 50V	220P	1	
C31004-08	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	5	
C31009	ECUX1H391JCV	C.CAPACITOR CH 50V	390P	1	
C31010	ECEV0JV470Q	E.CAPACITOR CH6.3V	47U	1	
C31011	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C31012	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	1	
C31013	ECUX1H151JCV	C.CAPACITOR CH 50V	150P	1	
C31014	ECEV0JV470Q	E.CAPACITOR CH6.3V	47U	1	
C31015	ECUX1H100DCV	C.CAPACITOR CH 50V	10P	1	
C31016,17	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C31018	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	1	
C31019-21	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C31022	ECUX1H271JCV	C.CAPACITOR CH 50V	270P	1	
C31023	ECUX1H221JCV	C.CAPACITOR CH 50V	220P	1	
C31024	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C31025	ECST1CX106Z	T.CAPACITOR CH 16V	10U	1	
C31026	ECUX1H820JCV	C.CAPACITOR CH 50V	82P	1	
C31027-30	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	4	
C31031	ECUX1H820JCV	C.CAPACITOR CH 50V	82P	1	
C31032	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C31035	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	1	
C31037	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	1	
C31041	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C31044,45	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	2	
C31046	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C31101,02	ECST1CX106Z	T.CAPACITOR CH 16V	10U	2	
C31103	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C31104	ECUX1H470JCV	C.CAPACITOR CH 50V	47P	1	
C31105	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C31106	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	1	
C31107	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C31108	ECUX1H102JCV	C.CAPACITOR CH 50V	1000P	1	
C31109,10	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C31111	ECST1CX106Z	T.CAPACITOR CH 16V	10U	1	
C31112,13	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	2	
C31114	ECUX1H151JCV	C.CAPACITOR CH 50V	150P	1	
C31117,18	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C31119	ECUX1H470JCV	C.CAPACITOR CH 50V	47P	1	
C31120	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	1	
C31121-23	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C31201,02	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C31203-05	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	3	
C31206,07	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C31208	ECST1CX106Z	T.CAPACITOR CH 16V 10U	1	
C31209-11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
D30201	MA142K	DIODE	1	
D30301	MA142WK	DIODE	1	
D30601	MA142K	DIODE	1	
D30801	MA142K	DIODE	1	
D30902	MA142K	DIODE	1	
D31001	MA142WK	DIODE	1	
D31002,03	MA335-R	DIODE	2	
FL30101,02	VLF0941C223	FILTER	2	
FL30201	VLF1015	FILTER	1	
FL30301	VLF1353	FILTER	1	
FL30401,02	VLF1355	FILTER	2	
FL30601,02	VLF0941C223	FILTER	2	
FL30801	VLF1354	FILTER	1	
FL30901,02	VLF1355	FILTER	2	
IC30201,02	XC62AP5002P	IC	2	
IC30203	XC62DN5002P	IC	1	
IC30204	CXD2024AQ	IC	1	
IC30205	MM74HC221AM	IC	1	
IC30206	LT1228CS8	IC	1	
IC30207	AN3296S	IC	1	
IC30208	TC4W53FU	IC	1	
IC30209	TC7SH08FU	IC	1	
IC30302	AN91A12S	IC	1	
IC30304	TC4W53FU	IC	1	
IC30305	NJM78L09UA	IC	1	
IC30307	TC4W53FU	IC	1	
IC30401	NJM78L09UA	IC	1	
IC30404,05	NJM1496V	IC	2	
IC30501	TC7SH08FU	IC	1	
IC30502	XC62DN5002P	IC	1	
IC30503	AD826AR	IC	1	
IC30504	XC62AP5002P	IC	1	
IC30505	AD817AR	IC	1	
IC30506	XC62AP5002P	IC	1	
IC30507-09	CXD11776Q	IC	3	
IC30510-12	TVHC541FT	IC	3	
IC30601	TC7W04FU	IC	1	
IC30602	MM74HC221AM	IC	1	
IC30604	TC7W74FU	IC	1	
IC30605	DM74LS221SJ	IC	1	
IC30606	XC62AP5002P	IC	1	
IC30607	NJM319V	IC	1	
IC30608	TC7W04FU	IC	1	
IC30609	NJM082BV	IC	1	
IC30610	NJM064V	IC	1	
IC30611	MC14053BF	IC	1	
IC30612	UPD65013BC16	IC	1	
IC30701	MN53015VZW	IC	1	
IC30702,03	TC7SH08FU	IC	2	
IC30801	MC14053BF	IC	1	
IC30802	TC7S32FU	IC	1	
IC30803	TC4W53FU	IC	1	
IC30804,05	LT1228CS8	IC	2	
IC30806	NJM2534V	IC	1	
IC30807	XC62AP5002P	IC	1	
IC30808	NJM082BV	IC	1	
IC30809	XC62DN5002P	IC	1	
IC30810	NJM78L09UA	IC	1	
IC30811	TC7W04FU	IC	1	
IC30812	TC7SH08FU	IC	1	
IC30813	TC4W53FU	IC	1	
IC30901	BA7655AF	IC	1	
IC30902	AD826AR	IC	1	
IC30903	XC62AP5002P	IC	1	
IC30904	NJM082BV	IC	1	
IC30905	M51272FP	IC	1	
IC31001	TC7SH08FU	IC	1	
IC31002	MC14053BF	IC	1	
IC31003	NJM082BV	IC	1	
IC31004	MM74HC221AM	IC	1	
IC31005	TC7S32FU	IC	1	
IC31101	MC14053BF	IC	1	
IC31102	AD826AR	IC	1	
IC31103	TC7SH08FU	IC	1	
IC31104	TC7S14F	IC	1	
IC31105	UPD6456T611Y	IC	1	
IC31106	NJM2534V	IC	1	
IC31201,02	TVHT244FT	IC	2	
IC31203	XC62AP3002P	IC	1	
IC31204	M62370GP	IC	1	
L30201-04	VL00319K101	COIL 100UH	4	
L30206,07	VL00319K101	COIL 100UH	2	
L30208	VL00163J180	COIL 18UH	1	
L30209	VL00163J220	COIL 22UH	1	
L30210	VL00163J180	COIL 18UH	1	
L30211	VL00163J220	COIL 22UH	1	
L30301,02	VL00319K101	COIL 100UH	2	
L30303	VL00133J471	COIL 470UH	1	
L30401-04	VL00319K101	COIL 100UH	4	
L30504-06	VL00319K101	COIL 100UH	3	
L30601-03	VL00319K101	COIL 100UH	3	
L30604	VL00163J470	COIL 47UH	1	
L30605,06	VL00319K101	COIL 100UH	2	
L30801,02	VL00319K101	COIL 100UH	2	
L30804	VL00163J470	COIL 47UH	1	
L30901,02	VL00319K101	COIL 100UH	2	
L30903	VL00163J470	COIL 47UH	1	
L30904	VL00163J270	COIL 27UH	1	
L30905	VL00163J6R8	COIL 6.8UH	1	
L30906,07	VL00163J5R6	COIL 5.6UH	2	
L31001,02	VL00319K101	COIL 100UH	2	
L31003	VL00163J181	COIL 180UH	1	
L31004	VL00163J560	COIL 56UH	1	
L31005-07	VL00163J470	COIL 47UH	3	
L31101,02	VL00163J470	COIL 47UH	2	
L31103	VL00163J270	COIL 27UH	1	
L31104	VL00163J680	COIL 68UH	1	
P30101	VJP4064Q160	CONNECTOR (MALE)	1	
Q30201	XN4601	TRANSISTOR-RESISTOR	1	
Q30202	2SB1218A-R	TRANSISTOR	1	
Q30203	2SA1532-B	TRANSISTOR	1	
Q30204	2SD1819A-R	TRANSISTOR	1	
Q30205	XN4501	TRANSISTOR-RESISTOR	1	
Q30206,07	2SD1819A-R	TRANSISTOR	2	
Q30208,09	2SB1218A-R	TRANSISTOR	2	
Q30303	2SB1218A-R	TRANSISTOR	1	
Q30304	2SD1819A-R	TRANSISTOR	1	
Q30305,06	2SB1218A-R	TRANSISTOR	2	
Q30307	2SA1532-B	TRANSISTOR	1	
Q30308,09	2SD1819A-R	TRANSISTOR	2	
Q30401,02	2SD1819A-R	TRANSISTOR	2	
Q30403,04	2SA1532-B	TRANSISTOR	2	
Q30405,06	2SD1819A-R	TRANSISTOR	2	
Q30501	2SD1819A-R	TRANSISTOR	1	
Q30601,02	2SD1819A-R	TRANSISTOR	2	
Q30801	2SD1819A-R	TRANSISTOR	1	
Q30802	XN4601	TRANSISTOR-RESISTOR	1	
Q30803	2SA1532-B	TRANSISTOR	1	
Q30804,05	2SD1819A-R	TRANSISTOR	2	
Q30806	2SA1532-B	TRANSISTOR	1	
Q30807	2SC3930-B	TRANSISTOR	1	
Q30808	2SB1218A-R	TRANSISTOR	1	
Q30809	2SA1532-B	TRANSISTOR	1	
Q30810	2SB1218A-R	TRANSISTOR	1	
Q30811	2SA1532-B	TRANSISTOR	1	
Q30812	2SD1819A-R	TRANSISTOR	1	
Q30813,14	2SA1532-B	TRANSISTOR	2	
Q30815,16	2SD1819A-R	TRANSISTOR	2	
Q30901-04	2SD1819A-R	TRANSISTOR	4	
Q30905,06	2SA1532-B	TRANSISTOR	2	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q030907,08	2SD1819A-R	TRANSISTOR	2	
Q030909	2SB1218A-R	TRANSISTOR	1	
Q030911	2SC3930-B	TRANSISTOR	1	
Q030912	2SB1218A-R	TRANSISTOR	1	
Q030914	2SC3930-B	TRANSISTOR	1	
Q031001	2SC3930-B	TRANSISTOR	1	
Q031002	2SD1819A-R	TRANSISTOR	1	
Q031003	2SB1218A-R	TRANSISTOR	1	
Q031004	2SC3930-B	TRANSISTOR	1	
Q031005,06	2SB1218A-R	TRANSISTOR	2	
Q031007	2SC3930-B	TRANSISTOR	1	
Q031008,09	2SB1218A-R	TRANSISTOR	2	
Q031012	2SD1819A-R	TRANSISTOR	1	
Q031015	2SD1819A-R	TRANSISTOR	1	
Q031101	XN4601	TRANSISTOR-RESISTOR	1	
Q031102	2SB1218A-R	TRANSISTOR	1	
Q031103,04	2SA1532-B	TRANSISTOR	2	
Q031105	2SB1218A-R	TRANSISTOR	1	
Q031106	2SD1819A-R	TRANSISTOR	1	
QR30501-03	UN5213	TRANSISTOR-RESISTOR	3	
R30201	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R30202	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30203	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R30204	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R30205	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R30206,07	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R30209	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30213	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30214	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30215	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30216	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30217	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30219	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30220	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30222	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R30223	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1	
R30224	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30225	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R30226	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30227	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R30228,29	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R30231,32	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R30233	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R30234	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30235	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R30236	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R30237,38	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R30239	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30240	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R30241	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R30242	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30243	ERJ3RBD122	M.RESISTOR CH 1/16W 1.2K	1	
R30244	ERJ3GEYJ750	M.RESISTOR CH 1/16W 75	1	
R30247	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30248	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R30249	ERJ3GEYJ564	M.RESISTOR CH 1/16W 560K	1	
R30250	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R30251	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R30252	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R30253	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R30254	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R30255	ERJ3RBD201	M.RESISTOR CH 1/16W 200	1	
R30256	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R30257,58	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	2	
R30259	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30260	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R30261	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R30262	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R30263	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R30264	ERJ3RBD201	M.RESISTOR CH 1/16W 200	1	
R30265	ERJ3GEYJ753	M.RESISTOR CH 1/16W 75K	1	
R30266	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30267	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R30268	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R30269	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R30270	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30271	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30274	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30275	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30276,77	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R30278	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R30279	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R30280	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R30281	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30282	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30283	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30284	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R30285	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30286,87	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R30288	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30289	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30302	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30303	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R30305	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30308	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R30309	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R30310	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R30312	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R30313	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30317	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30323	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R30324	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R30325-27	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	3	
R30330	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30331	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30334	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30338	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30339	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30340	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R30341	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R30342	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R30343	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30344	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30345,46	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R30347	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R30348	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30349,50	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R30351	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30352	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30353	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30354	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30401,02	ERJ3RBD101	M.RESISTOR CH 1/16W 100	2	
R30403,04	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R30405	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R30406	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30407	ERJ3RBD821	M.RESISTOR CH 1/16W 820	1	
R30408	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30409,10	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	2	
R30411,12	ERJ3RBD272	M.RESISTOR CH 1/16W 2.7K	2	
R30413-16	ERJ3RBD101	M.RESISTOR CH 1/16W 100	4	
R30417	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30418	ERJ3RBD272	M.RESISTOR CH 1/16W 2.7K	1	
R30419	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30420	ERJ3RBD272	M.RESISTOR CH 1/16W 2.7K	1	
R30421,22	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	2	
R30423-26	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	4	
R30427,28	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R30429-32	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	4	
R30433,34	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R30435,36	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R30437,38	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R30439,40	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	2	
R30501	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30503	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R30504-06	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R30509,10	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R30511	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R30512,13	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	2	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R30514	ERJ3RBD122	M.RESISTOR CH 1/16W 1.2K	1		R30805	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R30515-20	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	6		R30806	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30525	ERJ3RBD122	M.RESISTOR CH 1/16W 1.2K	1		R30807,08	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	2	
R30527	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1		R30809	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R30529	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1		R30810	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R30530,31	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2		R30811,12	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R30532	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1		R30813	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30533,34	ERJ3GEYJ750	M.RESISTOR CH 1/16W 75	2		R30814	ERJ3RBD821	M.RESISTOR CH 1/16W 820	1	
R30535	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1		R30815	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R30536	ERJ3GEYJ750	M.RESISTOR CH 1/16W 75	1		R30816,17	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R30537,38	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	2		R30818	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R30539	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1		R30819	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30542	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1		R30820	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30545	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1		R30821	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R30548	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R30822	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30555-57	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3		R30823,24	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R30558-81	ERJ3RBD101	M.RESISTOR CH 1/16W 100	24		R30825	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R30603	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30827	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R30604	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1		R30828-30	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	3	
R30605	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1		R30831	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R30606	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1		R30832	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R30607	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1		R30833	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R30608	ERJ3RBD272	M.RESISTOR CH 1/16W 2.7K	1		R30834	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30609	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R30835	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30610	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1		R30836	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R30611	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1		R30837	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R30612	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30838	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R30613	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R30839	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30614,15	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2		R30840	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R30616	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1		R30841	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30617,18	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2		R30842	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R30620	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1		R30844	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R30622	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1		R30845	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R30623	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R30846	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R30624	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1		R30847	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30625	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1		R30848	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R30626	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1		R30849	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R30627	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1		R30850	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R30628	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R30851	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R30629	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30852	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30630	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1		R30853	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R30631	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1		R30854	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R30633,34	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2		R30855	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R30635	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1		R30856	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30637	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1		R30857	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30638	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1		R30859	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R30639	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1		R30861	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R30640	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30862	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R30643-45	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3		R30863	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30649	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1		R30864,65	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R30650	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R30866	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R30651	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1		R30867	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R30652	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30868	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R30653	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1		R30869	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30654	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30870	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R30656	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R30871	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R30658	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30872	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30661	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30873	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30662	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R30874	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R30664	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1		R30875	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R30666	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30876	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R30667	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1		R30877	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R30668-70	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	3		R30878	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30671	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1		R30879	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30672	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30880	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R30673	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1		R30881	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R30674	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R30882	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R30701-04	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	4		R30883	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30705-07	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3		R30884	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30708	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R30901,02	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2	
R30709,10	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2		R30903,04	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R30801	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R30905	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30802	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R30906	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1	
R30803	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R30907	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R30804	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1		R30908	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R30909	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R30910	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30911-13	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	3	
R30914,15	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R30916	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R30917,18	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R30919,20	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R30921,22	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	2	
R30923	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30924	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R30925	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30926	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R30927,28	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R30929,30	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R30931,32	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R30933	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R30934	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R30935	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30936	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R30937	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R30938	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30940	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R30941,42	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R30943	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30944	ERJ3RBD821	M.RESISTOR CH 1/16W 820	1	
R30945	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30946	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30949	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R30950	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1	
R30951	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R30953	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30954	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30955	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R30956	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R30957	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30959	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R30960	VRE006607103	M.RESISTOR CH 1/10W 10K	1	
R30962	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30963	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R30965,66	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	2	
R30968	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R30969	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R30970	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R30972	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R30973	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30976	ERJ3RBD301	M.RESISTOR CH 1/16W 300	1	
R30981	ERJ3RBD301	M.RESISTOR CH 1/16W 300	1	
R30983	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30985	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R30988,89	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2	
R30990	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R30991	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R30994	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R30996,97	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2	
R30998	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1	
R30999	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R31001-04	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R31005	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R31006-09	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R31010	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R31011	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R31012	ERJ3RBD912	M.RESISTOR CH 1/16W 9.1K	1	
R31013	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R31014	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R31017	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R31018	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R31019	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R31020	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R31021	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R31022	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R31023,24	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R31025	ERJ3RBD122	M.RESISTOR CH 1/16W 1.2K	1	
R31026	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R31027	ERJ3RBD821	M.RESISTOR CH 1/16W 820	1	
R31028	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R31029	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R31030	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R31031	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R31032	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R31033	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R31034	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R31035	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R31036,37	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R31038	ERJ3RBD122	M.RESISTOR CH 1/16W 1.2K	1	
R31039	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R31040	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R31041	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R31042	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R31043,44	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R31045,46	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R31047	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R31048	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R31049	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R31050	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R31051	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R31052	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R31053	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R31054	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R31055	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R31061	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R31065	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R31067	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R31071	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R31074	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R31101	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R31102	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R31103,04	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R31105	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R31106,07	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	2	
R31108	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R31109	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R31110	ERJ3RBD561	M.RESISTOR CH 1/16W 560	1	
R31111	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R31112	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R31113	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R31114	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R31115	VRE006622102	V.RESISTOR CH 1/10W 1K	1	
R31116	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R31117	ERJ3RBD561	M.RESISTOR CH 1/16W 560	1	
R31118,19	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R31120	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1	
R31122	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R31123	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R31124	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R31125	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1	
R31126	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R31127,28	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R31129	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R31130	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R31131	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R31132	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R31133	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R31134	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R31136	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R31137	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R31138	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R31139	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R31140	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R31141,42	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R31201-03	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	3	
R31204-08	ERJ3RBD101	M.RESISTOR CH 1/16W 100	5	
R31210-14	ERJ3RBD101	M.RESISTOR CH 1/16W 100	5	
R31216-25	ERJ3RBD101	M.RESISTOR CH 1/16W 100	10	
R31226	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R31227	ERDS2TJ101	C.RESISTOR 1/4W 100	1	
TH31001	ERTD2FHL102S	THERMISTOR 1K	1	
TP30201	EYF6CU	TEST POINT	1	
TP30401	EYF6CU	TEST POINT	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
TP30501-03	EYF6CU	TEST POINT	3	
TP30601-07	EYF6CU	TEST POINT	7	
TP30701	EYF6CU	TEST POINT	1	
TP30801,02	EYF6CU	TEST POINT	2	
TP30901	EYF6CU	TEST POINT	1	
TP31001	EYF6CU	TEST POINT	1	
TP31101	EYF6CU	TEST POINT	1	
VC31101	VCV0050	TRIMMER	1	
VR30401,02	EVM7JGA00B13	V.RESISTOR 1K	2	
VR30501-03	EVM7JGA00B53	V.RESISTOR 5K	3	
VR30504-06	EVM7JGA00B13	V.RESISTOR 1K	3	
VR30507-09	EVM7JGA00B53	V.RESISTOR 5K	3	
VR30601	EVM7JGA00B14	V.RESISTOR 10K	1	
VR30602	EVM7JGA00B13	V.RESISTOR 1K	1	
VR30603	EVM7JGA00B53	V.RESISTOR 5K	1	
VR30604	EVM7JGA00B13	V.RESISTOR 1K	1	
VR30801	EVM7JGA00B53	V.RESISTOR 5K	1	
VR30802	EVM7JGA00B52	V.RESISTOR 500	1	
VR30803	EVM7JGA00B14	V.RESISTOR 10K	1	
VR30804,05	EVM7JGA00B13	V.RESISTOR 1K	2	
VR30806	EVM7JGA00B15	V.RESISTOR 100K	1	
VR30901	EVM7JGA00B23	V.RESISTOR 2K	3	
VR30903,04	EVM7JGA00B23	V.RESISTOR 2K	2	
VR30906	EVM7JGA00B13	V.RESISTOR 1K	1	
VR30907,08	EVM7JGA00B53	V.RESISTOR 5K	2	
VR30910	EVM7JGA00B52	V.RESISTOR 500	1	
VR31001	EVM7JGA00B24	V.RESISTOR 20K	1	
VR31002	EVM7JGA00B52	V.RESISTOR 500	1	
VR31101	EVM7JGA00B52	V.RESISTOR 500	1	
VR31102	EVM7JGA00B13	V.RESISTOR 1K	1	
X30601	VSX0338	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	XYN2+J6	SCREW	2	
■ E7	VEP04737A	AUDIO P.C.BOARD	1	(RTL)
C40031	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40032,33	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40034	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40049,50	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40051	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C40052,53	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40054	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C40055	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40068	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C40069	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40070	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C40071,72	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40073	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C40074	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40093	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C40094	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40095	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C40096	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C40097	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40098	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C40101-04	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C40106,07	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40109	ECHU1H472JB	P.CAPACITOR 50V 4700P	1	
C40110	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C40111	ECUX1H561JCV	C.CAPACITOR CH 50V 560P	1	
C40112	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C40113	ECUX1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C40114,15	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40116	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C40117	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C40118	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C40119	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40120	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40121	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40122,23	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	2	
C40124,25	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C40126,27	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40130	ECHU1H472JB	P.CAPACITOR 50V 4700P	1	
C40131	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C40132	ECUX1H561JCV	C.CAPACITOR CH 50V 560P	1	
C40133	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C40134	ECUX1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C40135,36	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40137	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C40138	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C40139	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C40140	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40141	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40142	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40143,44	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	2	
C40201	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40202	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C40203	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40206	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40207,08	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40209	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C40211	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C40212	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C40213-16	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C40217	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C40218	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40219	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C40220	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C40221	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C40222-24	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C40225	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C40226	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40230	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40231	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C40232	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40236	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40237	ECHU1H472JB	P.CAPACITOR 50V 4700P	1	
C40238	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C40239	ECHU1H472JB	P.CAPACITOR 50V 4700P	1	
C40240	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C40241	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40243,44	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40245	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C40246,47	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40248	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C40301	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C40302,03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40304,05	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	2	
C40306,07	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40308	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C40311	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C40312,13	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C40314,15	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40316	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40317,18	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40319	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40320,21	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40322	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C40324	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C40326,27	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40328,29	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C40330,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40332,33	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C40334,35	ECEV1HV0R1Q	E.CAPACITOR CH 50V 0.1U	2	
C40336,37	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C40338,39	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40502	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C40503	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40504	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C40505-10	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	6	
C40511	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40512-15	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C40517	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40518,19	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40520	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C40608	ECST1CD476Z	T.CAPACITOR CH 16V 47U	1	
C40609	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C40610	ECUX1H223KBN	C.CAPACITOR CH 50V 0.22U	1	
C40611	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C40612	ECEV1CV470Q	C.CAPACITOR CH 16V 47U	1	
C40613,14	ECHS1682JZ	P.CAPACITOR 100V 6800P	2	
C40615	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C40616	ECEV0JN100Q	E.CAPACITOR CH6.3V 10U	1	
C40617	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C40618	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C40619	ECUM1H273KBN	C.CAPACITOR CH 50V 0.027U	1	
C40620	ECUX1H822KBM	C.CAPACITOR CH 50V 8200P	1	
C40621,22	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40623	ECEV0JN100Q	E.CAPACITOR CH6.3V 10U	1	
C40624	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C40625	VCC0030	C.CAPACITOR	1	
C40626	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C40628	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C40629	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40630	ECST1CD476Z	T.CAPACITOR CH 16V 47U	1	
C40631	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C40632	ECUX1H223KBN	C.CAPACITOR CH 50V 0.22U	1	
C40633	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C40634	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C40635,36	ECHS1682JZ	P.CAPACITOR 100V 6800P	2	
C40701-03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C40704	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C40705	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C40706	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C40707	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40708	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C40709	ECST1VY104Z	T.CAPACITOR CH 35V 0.1U	1	
C40710	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C40711	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C40712	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C40713,14	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40715,16	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C40717,18	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	2	
C40719	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C40720,21	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40722	ECHU1H683JB	P.CAPACITOR 50V 0.068U	1	
C40723,24	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40725	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C40726,27	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40728	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C40729,30	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C40731	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C41001,02	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C41003	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C41004,05	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C41006	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C42001-06	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C42009,10	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	2	
C42011,12	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C42013	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C42014,15	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C42016	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C42017	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C42101,02	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	2	
C42103-12	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	10	
C42301	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C42302,03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C42304,05	ECEV1HV0R1Q	E.CAPACITOR CH 50V 0.1U	2	
C42306	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C42307	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C42308	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C42309,10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C42401-06	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C42407	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C42408	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
D40301	MA142WA	DIODE	1	
D40302	MA147	DIODE	1	
D40303,04	MA142WK	DIODE	2	
D40305,06	MA142K	DIODE	2	
D40307	MA142WK	DIODE	1	
D40501-03	MA128	DIODE	3	
D40504	MA142WK	DIODE	1	
D40505	MA128	DIODE	1	
D40602,03	MA142WK	DIODE	2	
FL40508,09	VLF0941C223	FILTER	2	
FL40601	EIR70F012B	TRANSFORMER	1	
FL40701	VLF1069	FILTER	1	
FL42401	VLF0941C223	FILTER	1	
IC40002	XC62AP5002M	IC	1	
IC40005	NJM79L09UA	IC	1	
IC40006	NJM78L09UA	IC	1	
IC40010	AK5340VS	IC	1	
IC40011	TVHC541FT	IC	1	
IC40016,17	AD7945BR	IC	2	
IC40018-21	TA75W558FU	IC	4	
IC40022	NJM062V	IC	1	
IC40023	TA75W558FU	IC	1	
IC40024	NJM062V	IC	1	
IC40025	TA75W558FU	IC	1	
IC40201	XC62AP5002M	IC	1	
IC40202	AK4320VM	IC	1	
IC40203	TVHC541FT	IC	1	
IC40204,05	TA75W558FU	IC	2	
IC40210	NJM78L09UA	IC	1	
IC40211	NJM79L09UA	IC	1	
IC40301	MC14053BDT	IC	1	
IC40302,03	UPD4052BG	IC	2	
IC40304-06	TA75W558FU	IC	3	
IC40307	XC62AP5002M	IC	1	
IC40308	XC62DN5002M	IC	1	
IC40309-11	TA75W558FU	IC	3	
IC40312	BA6138F	IC	1	
IC40502	LVX32450SC	IC	1	
IC40504,05	TVHT541FT	IC	2	
IC40506	TVHC139FT	IC	1	
IC40507	UPD71055GB	IC	1	
IC40508	TC7SH04FU	IC	1	
IC40509,10	UPD71055GB	IC	2	
IC40512	XC62AP5002P	IC	1	
IC40601	TA75W558FU	IC	1	
IC40701	CXA1552M	IC	1	
IC40702	MC14053BDT	IC	1	
IC40703	NJM062V	IC	1	
IC40704-07	TA75W558FU	IC	4	
IC41001	XC62AP3002P	IC	1	
IC41002	NJM78L09UA	IC	1	
IC42001-03	TVHT541FT	IC	3	
IC42004,05	TVHC541FT	IC	2	
IC42006	TC7SH04FU	IC	1	
IC42007,08	XC62AP5002P	IC	2	
IC42009	TVHC541FT	IC	1	
IC42101	T16GH7AF1216	IC	1	
IC42102,03	K6256DLG7L	IC	2	
IC42104	AD1893JST	IC	1	
IC42105	TVHC157FT	IC	1	
IC42301	XC62AP5002P	IC	1	
IC42302	MC4044M	IC	1	
IC42303	74AC04SJ	IC	1	
IC42304	T74VHC74F	IC	1	
IC42401	TVHT541FT	IC	1	
IC42402	HD151015	IC	1	
IC42403,04	TVHT541FT	IC	2	
IC42405	TVHC138FT	IC	1	
L40001	VL00163J100	COIL 10UH	1	
L40201	VL00163J100	COIL 10UH	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L40202,03	VLQ0319K101	COIL 100UH	2	
L40602	VLQ0423J472	COIL 4700UH	1	
L40604	VLQ0651K391	COIL 390UH	1	
P41001	VJP4064Q160	CONNECTOR (MALE)	1	
P41002	VJP3125B009	CONNECTOR (MALE)	1	
Q40003,04	2SD1979	TRANSISTOR	2	
Q40201,02	2SD1979	TRANSISTOR	2	
Q40301,02	2SD1979	TRANSISTOR	2	
Q40304-06	2SB1219A-R	TRANSISTOR	3	
Q40307-10	2SD1979	TRANSISTOR	4	
Q40311	2SB1219A-R	TRANSISTOR	1	
Q40604	2SB779-R	TRANSISTOR	1	
Q40605	2SD874-R	TRANSISTOR	1	
Q40606	2SD1819A-R	TRANSISTOR	1	
Q40607-09	2SD1979	TRANSISTOR	3	
Q40610	2SB1220-R	TRANSISTOR	1	
Q40611,12	2SD1821-R	TRANSISTOR	2	
Q40613	2SB779-R	TRANSISTOR	1	
Q40614	2SD1819A-R	TRANSISTOR	1	
Q40615	2SD874-R	TRANSISTOR	1	
QR40005	UN5213	TRANSISTOR-RESISTOR	1	
QR40006	UN5113	TRANSISTOR-RESISTOR	1	
QR40007	UN5213	TRANSISTOR-RESISTOR	1	
QR40008	UN5113	TRANSISTOR-RESISTOR	1	
QR40201	UN5213	TRANSISTOR-RESISTOR	1	
QR40202	UN5113	TRANSISTOR-RESISTOR	1	
QR40203	UN5213	TRANSISTOR-RESISTOR	1	
QR40204	UN5113	TRANSISTOR-RESISTOR	1	
QR40205	UN5213	TRANSISTOR-RESISTOR	1	
QR40301,02	UN5213	TRANSISTOR-RESISTOR	2	
QR40304	UN5213	TRANSISTOR-RESISTOR	1	
QR40602	UN5113	TRANSISTOR-RESISTOR	1	
QR40603	UN5213	TRANSISTOR-RESISTOR	1	
QR40604	UN5113	TRANSISTOR-RESISTOR	1	
QR40605	UN5213	TRANSISTOR-RESISTOR	1	
QR40606	UN5113	TRANSISTOR-RESISTOR	1	
QR40701	UN5113	TRANSISTOR-RESISTOR	1	
QR40702	UN5213	TRANSISTOR-RESISTOR	1	
QR40703	UN5113	TRANSISTOR-RESISTOR	1	
QR40704	UN5213	TRANSISTOR-RESISTOR	1	
R40047-53	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	7	
R40055	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40061	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40062	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R40063,64	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R40065	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R40066	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40075	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40077	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40078-81	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	4	
R40082	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R40083	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40084	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R40085,86	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	2	
R40087-89	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	3	
R40090	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R40091,92	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R40093	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R40094	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R40095-97	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R40098	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R40099	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40100	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R40101	ERJ3GEYJ752	M.RESISTOR CH 1/16W 7.5K	1	
R40102	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R40103	ERJ3RBD622	M.RESISTOR CH 1/16W 6.2K	1	
R40104	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40105	ERJ3GEYJ752	M.RESISTOR CH 1/16W 7.5K	1	
R40106	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R40107	ERJ3RBD622	M.RESISTOR CH 1/16W 6.2K	1	
R40108	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R40109	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40110	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R40111,12	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	2	
R40113	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40114	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40115-17	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	3	
R40118	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R40119,20	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R40121,22	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R40123	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R40124	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R40125-27	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R40128	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R40129	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R40130	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40131	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40132	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R40133	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40134	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R40135	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40136	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R40137	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R40201	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40202	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40203	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R40204	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40205,06	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	2	
R40207	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40208	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R40210,11	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	2	
R40212	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40213	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R40214	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R40215	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40216	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40217	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R40218-21	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4	
R40222	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R40223	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R40224	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R40225	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40226	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40227	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R40228	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R40229	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40230	ERJ3RBD123	M.RESISTOR CH 1/16W 12K	1	
R40231	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40232	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R40233	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R40234	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40235	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R40236	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40237	ERJ3RBD123	M.RESISTOR CH 1/16W 12K	1	
R40238	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40239	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40240,41	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	2	
R40242	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R40243-45	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R40301	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40302	ERJ3RBD392	M.RESISTOR CH 1/16W 3.9K	1	
R40304	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40305	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40306	ERJ3RBD392	M.RESISTOR CH 1/16W 3.9K	1	
R40308	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R40315	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40316	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R40317	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40318	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R40319	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R40320,21	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	2	
R40322	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40323	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40324	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R40325	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R40327	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R40328	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R40329,30	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R40331	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R40332	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R40334	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40335	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R40336	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40337	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R40338	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R40339	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R40340	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R40341	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R40342	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R40343	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R40344	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R40345	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R40347	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R40348	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R40349	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R40351	ERJ3GEYJ242	M.RESISTOR CH 1/16W 2.4K	1	
R40354	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40355	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R40356	ERJ3GEYJ242	M.RESISTOR CH 1/16W 2.4K	1	
R40357	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R40358	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40359,60	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2	
R40362	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40364,65	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R40367	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40369,70	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	2	
R40502,03	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R40504,05	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R40507-10	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	4	
R40511,12	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R40513-16	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	4	
R40518	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R40608	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R40609	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R40610	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40611	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R40612	ERJ3GEYJ390	M.RESISTOR CH 1/16W 39	1	
R40613	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1	
R40614	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40618	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40619,20	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	2	
R40621	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R40622	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R40623	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1	
R40624	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R40625	ERJ3RBD821	M.RESISTOR CH 1/16W 820	1	
R40626	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40627	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R40628	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40629	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40632	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R40633	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40634	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R40635	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40636	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R40637	ERJ6GEYJ201	M.RESISTOR CH 1/10W 200	1	
R40638	ERJ8GCYJ1R0	M.RESISTOR CH 1/8W 1	1	
R40639	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R40641	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40642	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R40643	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R40644	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40645	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R40646	ERJ8GCYJ1R0	M.RESISTOR CH 1/8W 1	1	
R40647	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1	
R40648	ERJ3GEYJ390	M.RESISTOR CH 1/16W 39	1	
R40649	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40701	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1	
R40702	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40703	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R40704	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R40705	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R40706,07	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	2	
R40708	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40709	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R40710	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R40711	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R40712	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R40713	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R40714	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1	
R40716	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40717	ERJ3RBD391	M.RESISTOR CH 1/16W 390	1	
R40720	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40722	ERJ3RBD104	M.RESISTOR CH 1/16W 100K	1	
R40724	ERJ3RBD242	M.RESISTOR CH 1/16W 2.4K	1	
R40725	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40726	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40728	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R40729	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40730	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40732	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R40733	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R40734	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R40735	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R40736	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R40738	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R40739	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R40740	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R42001	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R42002-11	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	10	
R42012-14	ERJ3RBD331	M.RESISTOR CH 1/16W 330	3	
R42016	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R42017,18	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R42020	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R42021	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R42023	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R42025	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R42029	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R42030-32	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R42034-38	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	5	
R42039	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R42101-04	ERJ3RBD331	M.RESISTOR CH 1/16W 330	4	
R42105	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R42106	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R42107-09	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R42111,12	ERJ3RBD331	M.RESISTOR CH 1/16W 330	2	
R42113	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R42114	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R42116	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R42117	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R42119,20	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R42121	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R42122	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R42123,24	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R42301	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R42302	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R42303	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R42304	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R42305,06	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R42401-04	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4	
R42405	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R42406-24	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	19	
R42425-40	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	16	
R42441	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R42442-44	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	3	
R42445	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
T40601,02	VLT0729	TRANSFORMER	2	
TG40001	EYF6CU	TEST POINT	1	
TG40208	EYF6CU	TEST POINT	1	
TG40701	EYF6CU	TEST POINT	1	
TP40003-07	EYF6CU	TEST POINT	5	
TP40206,07	EYF6CU	TEST POINT	2	
TP40210	EYF6CU	TEST POINT	1	

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Ref.No.	Part No.	Part Name & Description		Pcs	Remarks
TP40301,02	EYF6CU	TEST POINT		2	
TP40601	EYF6CU	TEST POINT		1	
TP40602	VJR0098	TEST POINT		1	
TP40603	EYF6CU	TEST POINT		1	
TP40701,02	EYF6CU	TEST POINT		2	
TP42102-04	EYF6CU	TEST POINT		3	
TP42301,02	EYF6CU	TEST POINT		2	
VR40003,04	EVM7JGA00B14	V.RESISTOR	10K	2	
VR40201,02	EVM7JGA00B14	V.RESISTOR	10K	2	
VR40301,02	EVM7JGA00B14	V.RESISTOR	10K	2	
VR40303,04	VRV0161B103	V.RESISTOR	10K	2	
VR40601	VRV0161B503	V.RESISTOR	50K	1	
VR40602	VRV0161B103	V.RESISTOR	10K	1	
VR40701	VRV0161B503	V.RESISTOR	50K	1	
X42101	VSX0519	CRYSTAL OSCILLATOR		1	
X42301	VSX0968	CRYSTAL OSCILLATOR		1	
		MISCELLANEOUS			
	XYN2+J6	SCREW		2	
■ E8	VEP05348C	RF P.C.BOARD		1	(RTL)
C5005-08	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	4	
C5009	ECEA1CGE101	E.CAPACITOR 16V	100U	1	
C5010-13	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	4	
C5014-17	ECEA1CGE101	E.CAPACITOR 16V	100U	4	
C5018-21	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	4	
C5022	ECEA1CGE101	E.CAPACITOR 16V	100U	1	
C5023	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5026	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5027	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C5028-30	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C5032	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5034,35	ECUX1H103KBV	C.CAPACITOR CH 50V	0.01U	2	
C5036	ECUM1H104ZFN	C.CAPACITOR CH 50V	0.1U	1	
C5037-44	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	8	
C5045-48	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	4	
C5049-58	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	10	
C5059,60	ECEV1EN4R7Q	E.CAPACITOR CH 25V	4.7U	2	
C5061,62	ECUX1H102KBV	C.CAPACITOR CH 50V	1000P	2	
C5063,64	ECUX1H121JCV	C.CAPACITOR CH 50V	120P	2	
C5065,66	ECUX1H150JCV	C.CAPACITOR CH 50V	15P	2	
C5067,68	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C5069,70	ECUX1H102KBV	C.CAPACITOR CH 50V	1000P	2	
C5071-74	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	4	
C5075,76	ECEV1EN4R7Q	E.CAPACITOR CH 25V	4.7U	2	
C5077-82	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	6	
C5103,04	ECUX1H220JCV	C.CAPACITOR CH 50V	22P	2	
C5105,06	ECUX1H181JCV	C.CAPACITOR CH 50V	180P	2	
C5107,08	ECUX1H080DCV	C.CAPACITOR CH 50V	8P	2	
C5109	ECUX1H030CCV	C.CAPACITOR CH 50V	3P	1	
C5110	ECUX1H150JCV	C.CAPACITOR CH 50V	15P	1	
C5111	ECUX1H030CCV	C.CAPACITOR CH 50V	3P	1	
C5112	ECUX1H150JCV	C.CAPACITOR CH 50V	15P	1	
C5113,14	ECUX1H080DCV	C.CAPACITOR CH 50V	8P	2	
C5201-04	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	4	
C5205	ECEV1CV100Q	E.CAPACITOR CH 16V	10U	1	
C5206-09	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	4	
C5210	ECEV1CV100Q	E.CAPACITOR CH 16V	10U	1	
C5211-16	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	6	
C5217-20	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	4	
C5221	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5222,23	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	2	
C5224,25	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C5227	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5251-53	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C5254	ECUX1H820JCV	C.CAPACITOR CH 50V	82P	1	
C5255,56	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C5257-59	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	3	
C5260	ECUX1C474ZFN	C.CAPACITOR CH 16V	0.47U	1	
C5262	ECUX1C684KBM	C.CAPACITOR CH 16V	0.68U	1	
C5264	ECUX1H151JCV	C.CAPACITOR CH 50V	150P	1	
C5265	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5267	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C5268	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5270	ECUX1H680JCV	C.CAPACITOR CH 50V	68P	1	
C5273-75	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	3	
C5276	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5277	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5278,79	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C5280	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5281,82	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C5284	ECUX1H270JCV	C.CAPACITOR CH 50V	27P	1	
C5286	ECUX1H470JCV	C.CAPACITOR CH 50V	47P	1	
C5287,88	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C5290-93	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	4	
C5294	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C5296	ECUX1H121JCV	C.CAPACITOR CH 50V	120P	1	
C5297	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5298	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5299-03	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	5	
C5304	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C5305	ECUX1H102JV	C.CAPACITOR CH 50V	1000P	1	
C5306-09	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	4	
C5310	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5311-16	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	6	
C5317	ECUX1H330JCV	C.CAPACITOR CH 50V	33P	1	
C5402-05	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	4	
C5406	ECUX1H102JV	C.CAPACITOR CH 50V	1000P	1	
C5407-12	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	6	
C5413	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5414-16	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C5417	ECUX1H122KBV	C.CAPACITOR CH 50V	1200P	1	
C5418	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5419	ECUX1H122KBV	C.CAPACITOR CH 50V	1200P	1	
C5420	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5421-26	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	6	
C5427,28	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	2	
C5429	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5430	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C5431	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5432	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C5433	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5434	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5435	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5436,37	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	
C5438	ECUX1H152KBV	C.CAPACITOR CH 50V	1500P	1	
C5439	ECUX1H680JCV	C.CAPACITOR CH 50V	68P	1	
C5440	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5441	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5442	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C5443	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5444	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5445	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5446	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5447	ECUX1H821JV	C.CAPACITOR CH 50V	820P	1	
C5448	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C5449-51	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C5452	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5453-55	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	3	
C5457,58	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	2	
C5459	ECUX1H101JCV	C.CAPACITOR CH 50V	100P	1	
C5460	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5461	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5462-65	ECUX1H152KBV	C.CAPACITOR CH 50V	1500P	4	
C5466	ECUX1E104KBN	C.CAPACITOR CH 25V	0.1U	1	
C5467	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5468	ECUM1C105ZFN	C.CAPACITOR CH 16V	1U	1	
C5469	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5470-77	ECUX1H270JCV	C.CAPACITOR CH 50V	27P	8	
C5501	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	1	
C5508,09	ECUX1E104ZFV	C.CAPACITOR CH 25V	0.1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5511,12	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C5514	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C5515-19	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C5520	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C5521-26	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C5529	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C5533-35	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C5601,02	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C5604	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C5606-25	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	20	
C5628-30	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C5632-40	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C5642	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C5644,45	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C5666,67	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C5672-80	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C5751	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5752	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C5753,54	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C5756	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C5757,58	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	2	
C5759,60	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C5761,62	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	2	
C5763	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C5769-74	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C5775	ECEA1CGE101	E.CAPACITOR 16V 100U	1	
C5776	ECEA1CGE471	E.CAPACITOR 16V 470U	1	
C5777-79	ECEA1CGE101	E.CAPACITOR 16V 100U	3	
C5780-88	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C5790	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C5791	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C5793,94	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C5800-02	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C5803	ECEA1CGE101	E.CAPACITOR 16V 100U	1	
C5804	ECEA1CGE471	E.CAPACITOR 16V 470U	1	
C5805,06	ECEA1CGE101	E.CAPACITOR 16V 100U	2	
C5807-11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
D5001-04	MA152WK	DIODE	4	
D5501	MA152K	DIODE	1	
D5751	MA153	DIODE	1	
FL5001-05	VLF0931	FILTER	5	
FL5751-59	VLF0931	FILTER	9	
IC5001	MB10HL116PF	IC	1	
IC5002	MB10HL131PF	IC	1	
IC5003,04	MB10HL116PF	IC	2	
IC5005	AN78M08	IC	1	
IC5006	AN79M08F	IC	1	
IC5201,02	UPC5102GS030	IC	2	
IC5251	MC1495D	IC	1	
IC5252	UPC1663G	IC	1	
IC5253	NJM1496M	IC	1	
IC5254	NJM082BM	IC	1	
IC5255	NJM319V	IC	1	
IC5401	AN3730FA	IC	1	
IC5402	TC4S66F	IC	1	
IC5403	AN3740FAP	IC	1	
IC5404	TC4S66F	IC	1	
IC5405	NJM064V	IC	1	
IC5406	NJM084M	IC	1	
IC5407	NJM082BV	IC	1	
IC5501	UPC1663G	IC	1	
IC5502	AD9057BRS	IC	1	
IC5503	T74LCX244F	IC	1	
IC5507	S80727ANDQ	IC	1	
IC5508	TC6326AF	IC	1	
IC5509	NJM084M	IC	1	
IC5510	TVHC32FT	IC	1	
IC5512	MC10H124M	IC	1	
IC5601	TCVHC86F	IC	1	
IC5602	M62370GP	IC	1	
IC5604	NJM064V	IC	1	
IC5605	TCVHCT04F	IC	1	
IC5606	TVHC32FT	IC	1	
IC5607-10	MC14053BF	IC	4	
IC5611	NJM064V	IC	1	
IC5612	NJM062M	IC	1	
IC5613	NJM064V	IC	1	
IC5751	MC74HC4066F	IC	1	
IC5752	TVHC32FT	IC	1	
IC5753	TCVHCT04F	IC	1	
IC5754	TCVHC74F	IC	1	
IC5755	TCVHC86F	IC	1	
IC5757	TVHC32FT	IC	1	
IC5758	TVHC153FT	IC	1	
IC5759	TCVHCT04F	IC	1	
IC5760	XC62AP3002P	IC	1	
IC5761	XC62AP3202P	IC	1	
IC5762	XC62AP3002P	IC	1	
IC5763	TC7SH86FU	IC	1	
IC5764	TC7SH08FU	IC	1	
L5001-04	VLQ0163J330	COIL 33UH	4	
L5101-04	VLQ0163J2R2	COIL 2.2UH	4	
L5251	VLQ0163J1R0	COIL 1UH	1	
L5252,53	VLQ0163J101	COIL 100UH	2	
L5254	VLQ0163JR68	COIL 0.68UH	1	
L5255	VLQ0163JR39	COIL 0.39UH	1	
L5256	VLQ0163JR33	COIL 0.33UH	1	
L5258,59	VLQ0163JR39	COIL 0.39UH	2	
L5260	VLQ0163JR68	COIL 0.68UH	1	
L5401-07	VLQ0771R10K	COIL 1UH	7	
P5000	VJP3454B096	CONNECTOR (MALE)	1	
P5001	VJS3900C013	CONNECTOR (FEMALE)	1	
P5201	VJS3900C010	CONNECTOR (FEMALE)	1	
Q5001	2SD2402	TRANSISTOR	1	
Q5002-05	2SB710A-R	TRANSISTOR	4	
Q5006,07	2SC3130	TRANSISTOR	2	
Q5008,09	2SA1022-C	TRANSISTOR	2	
Q5010,11	2SD1979	TRANSISTOR	2	
Q5012,13	2SC2954	TRANSISTOR	2	
Q5014	2SD1979	TRANSISTOR	1	
Q5015	2SA1022-C	TRANSISTOR	1	
Q5016	2SD1979	TRANSISTOR	1	
Q5017	2SA1022-C	TRANSISTOR	1	
Q5018,19	2SK508-B	TRANSISTOR	2	
Q5020,21	2SC2954	TRANSISTOR	2	
Q5022,23	2SD1979	TRANSISTOR	2	
Q5024,25	2SK508-B	TRANSISTOR	2	
Q5026,27	2SD1979	TRANSISTOR	2	
Q5028,29	2SC2954	TRANSISTOR	2	
Q5030,31	2SC3130	TRANSISTOR	2	
Q5103,04	2SB709A-R	TRANSISTOR	2	
Q5105-08	2SC3735-B	TRANSISTOR	4	
Q5201-03	2SB710A-R	TRANSISTOR	3	
Q5204-09	2SD1979	TRANSISTOR	6	
Q5210	2SC2295-C	TRANSISTOR	1	
Q5211	XN6537	TRANSISTOR-RESISTOR	1	
Q5212	2SC2295-C	TRANSISTOR	1	
Q5251	2SB710A-R	TRANSISTOR	1	
Q5252	XN5531	TRANSISTOR-RESISTOR	1	
Q5253	2SB710A-R	TRANSISTOR	1	
Q5254,55	2SK508K512	TRANSISTOR	2	
Q5256	2SB710A-R	TRANSISTOR	1	
Q5257	XN5531	TRANSISTOR-RESISTOR	1	
Q5258	2SB710A-R	TRANSISTOR	1	
Q5259-62	2SD1979	TRANSISTOR	4	
Q5263,64	2SC3130	TRANSISTOR	2	
Q5265	XN5531	TRANSISTOR-RESISTOR	1	
Q5266,67	2SC3130	TRANSISTOR	2	
Q5401	XN5531	TRANSISTOR-RESISTOR	1	
Q5402,03	2SC3130	TRANSISTOR	2	
Q5404	XN5531	TRANSISTOR-RESISTOR	1	
Q5601	2SA1022-C	TRANSISTOR	1	
Q5602	2SB710A-R	TRANSISTOR	1	
Q5751	2SB709A-R	TRANSISTOR	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q5752	2SD601A-R	TRANSISTOR	1	
Q5753,54	2SA1022-C	TRANSISTOR	2	
QR5001	UN5215	TRANSISTOR-RESISTOR	1	
QR5002	UN5213	TRANSISTOR-RESISTOR	1	
QR5003	UN5114	TRANSISTOR-RESISTOR	1	
QR5004-06	UN5213	TRANSISTOR-RESISTOR	3	
QR5101,02	UN5215	TRANSISTOR-RESISTOR	2	
QR5751,52	UN2215-R	TRANSISTOR-RESISTOR	2	
R5001,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R5003,04	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5005	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R5006	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5007	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5008	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5009-12	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	4	
R5013	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5014,15	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5017	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5018,19	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	2	
R5020,21	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5022,23	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R5024	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5026,27	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5028,29	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R5030	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5031,32	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	2	
R5033,34	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	2	
R5035	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5036-39	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	4	
R5040,41	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R5042,43	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R5044	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R5045,46	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R5047	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5048	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R5049	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5050,51	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5052-55	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	4	
R5056-59	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	4	
R5060,61	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R5062,63	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	2	
R5064,65	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2	
R5066,67	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5068,69	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	2	
R5070,71	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	2	
R5072,73	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R5074,75	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5076,77	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2	
R5078,79	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	
R5080,81	ERJ12YJ270	M.RESISTOR CH 1/2W 270	2	
R5082,83	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5084,85	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R5086,87	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2	
R5088-90	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	3	
R5091	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R5092	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R5093	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R5094,95	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
R5107,08	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	2	
R5109,10	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R5111	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R5112	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R5113	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R5114	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R5115	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R5116	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R5117,18	ERJ8GCYG101	M.RESISTOR CH 1/8W 100	2	
R5119,20	ERJ8GCYJ680	M.RESISTOR CH 1/8W 68	2	
R5121,22	ERJ8GCYG101	M.RESISTOR CH 1/8W 100	2	
R5123	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R5124	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R5125	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R5126	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R5127,28	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R5129-34	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	6	
R5201	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5202	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5203,04	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	2	
R5205	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5206	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5207	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5208	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5209-12	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	4	
R5213,14	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5215,16	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2	
R5217,18	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R5219,20	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5221,22	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R5223	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5224	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R5226	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R5227	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R5228	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R5229	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R5230-32	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	3	
R5251	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5252,53	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
R5254,55	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	2	
R5256	ERJ3RBD391	M.RESISTOR CH 1/16W 390	1	
R5257	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5258,59	ERJ3RBD181	M.RESISTOR CH 1/16W 180	2	
R5260,61	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	
R5262,63	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R5264	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5265	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5266,67	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5268	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5269	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5270	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5271,72	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R5273	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R5274,75	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5276	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5277,78	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2	
R5279,80	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5281	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R5282	ERJ3RED510	M.RESISTOR CH 1/16W 51	1	
R5283	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R5284,85	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2	
R5286	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5287	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R5288	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R5289-92	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	4	
R5293	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5294	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R5295	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5296	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5297	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5298,99	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R5300-04	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	5	
R5305	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R5306-09	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	4	
R5310,11	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5312	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5313	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R5314	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R5315	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R5316	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R5317	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R5318	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5319	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R5320	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R5321	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R5322,23	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	2	
R5325	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R5326	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R5327	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5328	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R5329,30	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5331	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R5332	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5333	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R5334,35	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	2	
R5336-39	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R5340,41	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	2	
R5343	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5344	ERJ3RBD273	M.RESISTOR CH 1/16W 27K	1	
R5345	ERJ3RBD392	M.RESISTOR CH 1/16W 3.9K	1	
R5346	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R5347	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5348	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5349	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5350	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R5351	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R5352	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R5403,04	ERJ3RBD561	M.RESISTOR CH 1/16W 560	2	
R5407	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5409,10	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5411	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R5412	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R5413	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R5414	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R5415,16	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R5417	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5418	ERJ3RBD272	M.RESISTOR CH 1/16W 2.7K	1	
R5419	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R5420	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5421	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R5422,23	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R5424	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R5426	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R5427	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5428	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R5429	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5430	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5431	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R5432	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5433	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R5434	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5435	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R5436	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R5437	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R5438	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5440	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R5441	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5442	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R5443,44	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5445	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5446	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
R5448	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R5449	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R5450	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R5452	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R5453	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5454	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R5455	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R5456	ERJ3RED510	M.RESISTOR CH 1/16W 51	1	
R5457	ERJ3RED750	M.RESISTOR CH 1/16W 75	1	
R5458	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5459	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1	
R5460-62	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	3	
R5463	ERJ3RBD182	M.RESISTOR CH 1/16W 1.8K	1	
R5466	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R5505,06	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R5510,11	ERJ3RED360	M.RESISTOR CH 1/16W 36	2	
R5513,14	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5515,16	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	2	
R5517	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R5518	ERJ3RED510	M.RESISTOR CH 1/16W 51	1	
R5519	ERJ3RBD821	M.RESISTOR CH 1/16W 820	1	
R5520	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5531	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R5534	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R5535	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R5543	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R5548	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R5549	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1	
R5550	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5552	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5553	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R5557	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R5559	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R5560-63	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	4	
R5564	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5565-68	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	4	
R5569	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5571	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5572	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5573	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5601-03	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R5609-11	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R5619	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R5621	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R5622	ERJ3RBD123	M.RESISTOR CH 1/16W 12K	1	
R5623	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R5624	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1	
R5625	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5626	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R5627	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R5628	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5629,30	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	2	
R5631	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5633-35	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R5638,39	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R5640	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R5641	ERJ3RBD123	M.RESISTOR CH 1/16W 12K	1	
R5642	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1	
R5643	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R5644	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R5645,46	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	2	
R5647,48	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R5660	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5667	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5672	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5674,75	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R5676	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5677	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R5678	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5679	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R5680	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5682	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1	
R5683	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R5684	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5685	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5690	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5695	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5696	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R5697	ERJ3RBD272	M.RESISTOR CH 1/16W 2.7K	1	
R5698,99	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R5700	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R5701,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R5703,04	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R5705-10	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	6	
R5751	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5752	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R5753	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R5754-58	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	5	
R5760-67	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	8	
R5772,73	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R5774-77	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R5778	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5779,80	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5781,82	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	2	
R5783-87	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	5	
R5788	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R5789	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R5790	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R5791	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5792	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5793-95	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R5796	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5797	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5798,99	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R5800-02	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R5803	ERDS2TJ390	C.RESISTOR 1/4W 39	1	
R5804-06	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R5807	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5808,09	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5810-20	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	11	
TG5001	EYF6CU	TEST POINT	1	
TG5251	EYF6CU	TEST POINT	1	
TG5401	EYF6CU	TEST POINT	1	
TG5502	EYF6CU	TEST POINT	1	
TG5751	EYF6CU	TEST POINT	1	
TP5001-04	EYF6CU	TEST POINT	4	
TP5101,02	EYF6CU	TEST POINT	2	
TP5251,52	EYF6CU	TEST POINT	2	
TP5401-04	EYF6CU	TEST POINT	4	
TP5751,52	EYF6CU	TEST POINT	2	
TP5755-57	EYF6CU	TEST POINT	3	
TP5759	EYF6CU	TEST POINT	1	
TP5901-08	EYF6CU	TEST POINT	8	
VR5402	VRV0161B502	V.RESISTOR 5K	1	
		MISCELLANEOUS		
	VMP5358	P.C.B. ANGLE	2	
	XTV3+6FFR	SCREW	2	
■ E9	VEP06B93B	RS-232C P.C.BOARD	1	(RTL)
C6001-05	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	5	
IC6001	ADM202JN	IC	1	
L6001-03	VLP0083	COIL	3	
P6001	VJS2582B009	CONNECTOR (FEMALE)	1	
P6002	VJS3533	CONNECTOR (FEMALE)	1	
R6001-03	ERDS2TJ100	C.RESISTOR 1/4W 10	3	
TG6005	VJR0098	TEST POINT	1	
TP6001-04	VJR0098	TEST POINT	4	
		MISCELLANEOUS		
	XSB3+6FZ	SCREW	2	
	VMP5359	OPTION ANGLE	1	
■ E10	VEP06D02A	AV SYSCON P.C.BOARD	1	(RTL)
C60001	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60002	ECEV1HVR33Q	E.CAPACITOR CH 50V 0.33U	1	
C60003	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60006	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60008-11	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	4	
C60012	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C60013	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C60014	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C60015-17	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C60018	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C60019	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60020	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C60021-27	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	7	
C60029,30	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C60032,33	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	2	
C60034	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60101-03	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C60201	ECUX1H272KBV	C.CAPACITOR CH 50V 2700P	1	
C60202-12	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	11	
C60214	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60301-04	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	4	
C60306	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60308	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60401-04	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	4	
C60405	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C60406	ECUX1E105KBP	C.CAPACITOR CH 25V 1U	1	
C60407	VCK0152	C.CAPACITOR	1	
C60408,09	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C60410	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60501-05	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	5	
C60603	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60604	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C60605	VCK0152	C.CAPACITOR	1	
C60606	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C60607	VCK0152	C.CAPACITOR	1	
C60608	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C60609	VCK0152	C.CAPACITOR	1	
C60901-12	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	12	
C60913	ECHU1C104JB	P.CAPACITOR 16V 0.1U	1	
C60914	ECEV1HV3R3Q	E.CAPACITOR CH 50V 3.3U	1	
C60915	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C60916	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C60917	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C60918-20	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C61001,02	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C61003-06	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	4	
C61101	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
D60001,02	MA143	DIODE	2	
D60201	MA143	DIODE	1	
D60402-05	MA142WK	DIODE	4	
D60406	MA142WA	DIODE	1	
D60407	MA142WK	DIODE	1	
D60408	MA142K	DIODE	1	
FL60601-03	VLF0941C223	FILTER	3	
IC60001	M31010M6104H	IC	1	
IC60002	S80730ANDT	IC	1	
IC60003	TVHC14FT	IC	1	
IC60004	TVHC126FT	IC	1	
IC60005	TVHC04FT	IC	1	
IC60006	TVHC08FT	IC	1	
IC60007	TVHC32FT	IC	1	
IC60008	TVHC74FT	IC	1	
IC60009,10	TVHC138FT	IC	2	
IC60011	TVHC00FT	IC	1	
IC60013	TC7SH32FU	IC	1	
IC60101	MBLV80BA12PT	IC	1	
IC60102,03	KM68V1CL	IC	2	
IC60201	T163G26-1019	IC	1	
IC60202	TVHC14FT	IC	1	
IC60203	TVHC04FT	IC	1	
IC60204	UPC393G2	IC	1	
IC60206	TVHC14FT	IC	1	
IC60301	LVX32450SC	IC	1	
IC60302-04	TVHT541FT	IC	3	
IC60306	TC7SH08FU	IC	1	
IC60308	TVHC245FT	IC	1	
IC60401	TVHC08FT	IC	1	
IC60402	MC14538BF	IC	1	
IC60403	TVHC123FT	IC	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC60404	MC14538BF	IC	1	
IC60405	TC7SH32FU	IC	1	
IC60501	TVHC245FT	IC	1	
IC60502-05	TVHC244FT	IC	4	
IC60901	TVHT04FT	IC	1	
IC60902	TVHC32FT	IC	1	
IC60903,04	TVHC573FT	IC	2	
IC60905	D703003GC017	IC	1	
IC60906	TC7SH04FU	IC	1	
IC60907	TVHC04FT	IC	1	
IC60908	TVHC139FT	IC	1	
IC60909	TL7705CPSB	IC	1	
IC61001	IDT71321L55F	IC	1	
IC61002	STK12C68S45	IC	1	
IC61003	MBF8TA90PFTS	IC	1	
IC61101	TVHC126FT	IC	1	
ID60101	VS13138A	IC	1	
ID61003	VS13139B	IC	1	
L60001	VLQ0319K100	COIL 10UH	1	
L60501-35	VLP0155	COIL	35	
L60601	VLQ0319K100	COIL 10UH	1	
L60901	VLQ0319K100	COIL 10UH	1	
P60601	VJP4064Q160	CONNECTOR (MALE)	1	
P60801	VJS3791B050	CONNECTOR (FEMALE)	1	
P60802	VJS3791B020	CONNECTOR (FEMALE)	1	
P60804	VJS3791B020	CONNECTOR (FEMALE)	1	
P61101,02	VJS3406B009	CONNECTOR (FEMALE)	2	
QR60001	UN5213	TRANSISTOR-RESISTOR	1	
QR60201	UN5213	TRANSISTOR-RESISTOR	1	
QR60401-21	UN5214	TRANSISTOR-RESISTOR	21	
R60001	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R60002	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R60003-09	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	7	
R60010	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R60011	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60013	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R60014,15	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R60017	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R60018-21	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	
R60022	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R60023	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60024	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R60025	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60026	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R60029,30	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R60032-34	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	3	
R60035	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R60036-38	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	3	
R60040-43	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	4	
R60045,46	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R60047-50	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4	
R60053-56	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4	
R60059,60	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R60064	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60065	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R60066-68	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R60101	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R60102-04	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R60105	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R60201	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R60203,04	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R60205,06	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R60207	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60208	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R60209	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R60210	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R60211	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R60212,13	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R60214	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R60216	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R60218,19	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R60220	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R60221-25	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	5	
R60226	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60227-38	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	12	
R60239,40	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R60241,42	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R60243	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R60244-46	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	3	
R60247	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R60248-52	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	5	
R60253-62	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	10	
R60263	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R60264,65	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R60266,67	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R60270	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R60271-73	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R60301-05	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	5	
R60306-08	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R60309-34	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	26	
R60401-05	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	5	
R60406-13	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	8	
R60414-17	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	4	
R60418	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R60419	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R60420	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60421,22	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	2	
R60423,24	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R60503,04	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R60505-07	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	3	
R60508-11	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R60512	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R60513-20	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	8	
R60603-10	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	8	
R60901,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R60903	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R60904,05	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R60906,07	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R60909,10	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R60911	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R60914	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R60916	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60917-23	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	7	
R60925-29	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	5	
R60930,31	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R60932-39	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	8	
R60940	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60942	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60943,44	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R60945	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R60946	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R60947-49	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R60950-57	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	8	
R61001	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R61002	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R61003,04	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R61005	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R61103	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R61104	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R61105	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R61106	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R61107-11	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	5	
R61112,13	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
SW60902	VSS0367-04B	SWITCH	1	
TG60001	EYF6CU	TEST POINT	1	
TG60901	EYF6CU	TEST POINT	1	
TP60001-03	EYF6CU	TEST POINT	3	
TP60901-03	EYF6CU	TEST POINT	3	
TP61101,02	EYF6CU	TEST POINT	2	
VR60001,02	VRV0161B203	V.RESISTOR 20K	2	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
X60001	VSX0833	CRYSTAL OSCILLATOR	1	
X60901	VSX1034	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	XYN2+J6	SCREW	2	
■ E11	VEP03F25A	REAR JACK P.C.BOARD	1	(RTL)
C701,02	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C703,04	ECEA1CKA470	E.CAPACITOR 16V 47U	2	
C706,07	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C708	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C709,10	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C711	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C715,16	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C717	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C718	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C719	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C720,21	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C726,27	ECEA1CKN330	E.CAPACITOR 16V 33U	2	
D701-03	MA151K	DIODE	3	
FL701,02	VLP0145	COIL	2	
FL705-14	VLP0145	COIL	10	
IC701	MC74HC4053F	IC	1	
IC702	XC62AP5002P	IC	1	
IC703	XC62DN5002P	IC	1	
J701,02	VJS3155	CONNECTOR (FEMALE)	2	
J703-06	VJS3154	CONNECTOR (FEMALE)	4	
J707-09	VJJ0323	RCA PIN JACK	3	
L701-04	VL00319K101	COIL 100UH	4	
P701,02	VJP3600F016K	CONNECTOR (MALE)	2	
QR701-03	XN4601	TRANSISTOR-RESISTOR	3	
QR705	XN4501	TRANSISTOR-RESISTOR	1	
QR706	XN4401	TRANSISTOR-RESISTOR	1	
QR707	XN4501	TRANSISTOR-RESISTOR	1	
QR708	XN4401	TRANSISTOR-RESISTOR	1	
QR709	XN4501	TRANSISTOR-RESISTOR	1	
QR710	XN4401	TRANSISTOR-RESISTOR	1	
QR711	XN4501	TRANSISTOR-RESISTOR	1	
QR712	XN4401	TRANSISTOR-RESISTOR	1	
QR713	XN4501	TRANSISTOR-RESISTOR	1	
QR714	UN5113	TRANSISTOR-RESISTOR	1	
R701-03	ERJ6RED750	M.RESISTOR CH 1/10W 75	3	
R704	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R705	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R707	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R708	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R709	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R710	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R711	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R712	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R713	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R714	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R715	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R716	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R717-19	ERJ6RED680	M.RESISTOR CH 1/10W 68	3	
R721	ERJ6RED680	M.RESISTOR CH 1/10W 68	1	
R724	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R726	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R727	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R728	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R729	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R731	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R732	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R733,34	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R735	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R736,37	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	2	
R738	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R740	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R741	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R742	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R743	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R744	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R745	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R746	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R747	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R748	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R750	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R751	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R752,53	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R754,55	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	2	
R756	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R758	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R759	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R760,61	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R762	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R763,64	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	2	
R765	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R766	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R767,68	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R769-72	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	4	
R773-76	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
■ E12	VEP06B94C	FRONT P.C.BOARD	1	(RTL)
■	VEP00Y35B	REMOTE P.C.BOARD	1	(RTL)FOR VEP06B94C
C65001	ECEA1AKS221	E.CAPACITOR 10V 220U	1	
C65002,03	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C65004	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C65005	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C65006	ECEA1CKS330	E.CAPACITOR 16V 33U	1	
C65007	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C65008	ECEA1AKS221	E.CAPACITOR 10V 220U	1	
C65009,10	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C65011,12	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	2	
C65013,14	ECKF1H121KB	C.CAPACITOR 50V 120P	2	
C65301	ECKF1H101KB	C.CAPACITOR 50V 100P	1	
D65002	MA701A	DIODE	1	
D65003-07	MA153	DIODE	5	
D65008-10	MA151K	DIODE	3	
D65101-13	MA151K	DIODE	13	
D65116-19	MA151K	DIODE	4	
D65120-23	LN38GCPP	LED	4	
D65124	LN28RCPP	LED	1	
D65125-28	LN38GCPP	LED	4	
DP65001	VSL0489	DISPLAY	1	
IC65001	UPD75236J039	IC	1	
IC65002	MN1382-R	IC	1	
J65001	VJJ0571	JACK	1	
J65005	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
J65301	VJJ0277	REMOTE CONTROL JACK	1	
L65001,02	VL00319K101	COIL 100UH	2	
L65003	VL00319K121	COIL 120UH	1	
P65001	VJS3537B024G	CONNECTOR (FEMALE)	1	
P65003	VJP3042A006W	CONNECTOR (MALE)	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P65301	VJS3042B006W	CONNECTOR (FEMALE)	1	
Q65002,03	2SB710A-R	TRANSISTOR	2	
Q65101-08	MSD601-R	TRANSISTOR	8	
QR65002,03	MUN2213	TRANSISTOR-RESISTOR	2	
R65004	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R65008	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R65011-13	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
R65014	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R65015-23	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	9	
R65024-27	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	4	
R65028,29	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R65030	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R65031-33	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
R65035-42	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	8	
R65043-50	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R65051-58	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	8	
R65064	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R65065	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R65066	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	
R65067	ERJ6RBD683	M.RESISTOR CH 1/10W 68K	1	
R65069,70	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R65071-74	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	4	
R65075,76	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R65079-95	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	17	
R65096	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R65101-08	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	8	
R65109-16	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	8	
R65117	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
SW65101-06	EVQQS307K	SWITCH	6	
SW65107	EVQ11409K	SWITCH	1	
SW65108-11	EVQQS307K	SWITCH	4	
SW65112,13	VSS0249	SWITCH	2	
SW65114	EVQQS307K	SWITCH	1	
VR65001,02	EVUF1AEA3B24	V.RESISTOR 20K	2	
VR65003	EVJYM0F15C23	V.RESISTOR 2K	1	
X65001	VSX0140	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VJF1296	LCD HOLDER	1	
	VG00458	LCD SPACER	9	
	VZT0045	CUSHION	1	
■ E13	VEP80856A	CARRIGE P.C.BOARD	1	(RTL)
P1	VJP1249T	CONNECTOR (MALE) 9P	1	
P2	VJS2889A012	CONNECTOR (FEMALE)	1	
P3	VJS2889A016	CONNECTOR (FEMALE)	1	
R1-R7	ERDS2TJ221	C.RESISTOR 1/4W 220	7	
■ E14	VEP02545J	SERVO P.C.BOARD	1	(RTL)
C2001	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2003	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2101	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2103	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2107,08	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C2109,10	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C2111,12	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C2113	ECEV1HVR33Q	E.CAPACITOR CH 50V 0.33U	1	
C2114	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2115	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2116	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C2117	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2201	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C2202	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2203	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C2204	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2205	ECUX1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C2206	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2208,09	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C2210	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2211	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C2212	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2213,14	ECUX1H562KBV	C.CAPACITOR CH 50V 5600P	2	
C2215,16	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2217	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2218,19	ECUX1H010CCV	C.CAPACITOR CH 50V 1P	2	
C2221	ECUX1C333KBV	C.CAPACITOR CH 16V 0.033U	1	
C2222,23	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C2224	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2225	ECUX1H562KBV	C.CAPACITOR CH 50V 5600P	1	
C2226,27	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C2301	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C2302,03	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	2	
C2304	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C2305,06	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	2	
C2307	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2308	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C2309	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2310	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C2311	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2312	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C2313	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2314	VCK0152	C.CAPACITOR	1	
C2315-20	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	6	
C2402	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2406	ECUX1H562KBV	C.CAPACITOR CH 50V 5600P	1	
C2408,09	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C2411	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2413	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2414-16	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	3	
C2417,18	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	2	
C2419	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C2420,21	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	2	
C2422	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C2423,24	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	2	
C2425	ECUM1C474KBM	C.CAPACITOR CH 16V 0.47U	1	
C2426	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C2427	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2432	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C2434	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C2437	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C2438	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2444	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2445	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2450	ECUX1H562KBV	C.CAPACITOR CH 50V 5600P	1	
C2451	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2455-57	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	3	
C2458-60	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	3	
C2461	ECUM1C474KBM	C.CAPACITOR CH 16V 0.47U	1	
C2462	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2463,64	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	2	
C2465-67	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	3	
C2468-70	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	3	
C2471-76	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	6	
C2477,78	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C2479	VCK0152	C.CAPACITOR	1	
C2480	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2501-06	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	6	
C2507	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C2508-12	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	5	
C2513,14	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	2	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C2515-19	VCE0180	E.CAPACITOR	5	
C2520-25	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	6	
C2526-31	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	6	
C2532-37	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	6	
C2539,40	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C2541	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2542	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2543	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2601	VCE0180	E.CAPACITOR	1	
C2603	VCE0180	E.CAPACITOR	1	
C2606	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2607	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2608	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2609	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2610	VCC0037F432	C.CAPACITOR 432P	1	
C2611	VCE0180	E.CAPACITOR	1	
C2613	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2614	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2615	VCE0180	E.CAPACITOR	1	
C2617	VCE0180	E.CAPACITOR	1	
C2619	VCK0152	C.CAPACITOR	1	
C2620	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2621	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C2622	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2707	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2708	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2709	ECUX1H122KBV	C.CAPACITOR CH 50V 1200P	1	
C2710	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C2711	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2712,13	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C2714	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2715	ECUX1E273KBV	C.CAPACITOR CH 25V 0.027U	1	
C2716	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C2717	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2719	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2721-24	ECEV1AV330Q	E.CAPACITOR CH 10V 33U	4	
C2725,26	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C2727	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C2728,29	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C2801-04	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	4	
C2903	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2904	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2905	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C2906	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2907	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C2908	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2909	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C2910	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2911	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C2912	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C2913	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2914	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C2915	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C2918	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C2919	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2921	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2923-25	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C2926	ECEV1HV3R3Q	E.CAPACITOR CH 50V 3.3U	1	
C2927	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2928	VCK0152	C.CAPACITOR	1	
C2932	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2934	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2935	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C2937	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C2942	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2947-49	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C2951	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C2952-55	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	4	
C64001	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C64002	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C64003	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C64201,02	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C64203	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C64204,05	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	2	
C64206	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C64207	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C64208	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C64209	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
D2001,02	MA704	DIODE	2	
D2301,02	MA143	DIODE	2	
D2401-06	MA738	DIODE	6	
D2450-55	MA738	DIODE	6	
D2501,02	MA736	DIODE	2	
D2503,04	MA728	DIODE	2	
D2601	MA728	DIODE	1	
D2602	MA736	DIODE	1	
D2603	MA728	DIODE	1	
D2604	MA736	DIODE	1	
D2701-03	MA143	DIODE	3	
D2901-04	MA143	DIODE	4	
D2906,07	MA736	DIODE	2	
D64001	MA8051-H	DIODE	1	
D64002	21D004	DIODE	1	
D64003-08	MA738	DIODE	6	
D64009,10	NS003A04	DIODE	2	
D64011,12	MA738	DIODE	2	
D64013,14	NS003A04	DIODE	2	
D64015-22	MA738	DIODE	8	
D64023-26	MA142WA	DIODE	4	
D64201	MA3100-L	DIODE	1	
D64203	MA3068-M	DIODE	1	
D64204	MA3056-M	DIODE	1	
D64205	MA3051-M	DIODE	1	
D64209	MA3056-H	DIODE	1	
D64210	MA3100-L	DIODE	1	
D64214	MA3075-M	DIODE	1	
D64215	MA738	DIODE	1	
D64216	MA142WK	DIODE	1	
FL2001	VLF0941C223	FILTER	1	
IC2101	VS13122	IC	1	
IC2102	TC7SHU04FU	IC	1	
IC2103	S80730ANDT	IC	1	
IC2104,05	TC4W53FU	IC	2	
IC2106	TC7SHU04FU	IC	1	
IC2201	VS13121	IC	1	
IC2202	SC371025AVFU	IC	1	
IC2203	TA75W01FU	IC	1	
IC2205	TC7W74FU	IC	1	
IC2206	TA75W01FU	IC	1	
IC2207	TVHC574FT	IC	1	
IC2209-11	TC7SHU04FU	IC	3	
IC2301	TA75W558FU	IC	1	
IC2302	TA75W393FU	IC	1	
IC2303	TA75W558FU	IC	1	
IC2304	TA75W393FU	IC	1	
IC2305	TA75W558FU	IC	1	
IC2306	TC7W74FU	IC	1	
IC2401,02	AN3834S	IC	2	
IC2404	TA75W558FU	IC	1	
IC2405	TA75W01FU	IC	1	
IC2406	TA75W393FU	IC	1	
IC2407	XC62DN5002P	IC	1	
IC2502	TA75W393FU	IC	1	
IC2503	TB6519F	IC	1	
IC2506	TB6519F	IC	1	
IC2601	TL1451CNS	IC	1	
IC2602	XC62AP5002P	IC	1	
IC2701	UPC4556G2	IC	1	
IC2702	TC4W53FU	IC	1	
IC2703	NJM4565MD	IC	1	
IC2704	TC7W04F	IC	1	
IC2705	TC7W74FU	IC	1	
IC2801	T160G11-1258	IC	1	
IC2901	TA75W558FU	IC	1	
IC2902	TA75W393FU	IC	1	
IC2904	TA75W558FU	IC	1	
IC2905	TA75W393FU	IC	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC2906,07	UPC4558G2	IC	2	
IC2908	TA75W01FU	IC	1	
IC64001	NJM2904M	IC	1	
IC64201,02	M54649L	IC	2	
L2001	VLQ00319K101	COIL 100UH	1	
L2003	VLQ00319K100	COIL 10UH	1	
L2101	VLQ00319K100	COIL 10UH	1	
L2102	VLQ00319K101	COIL 100UH	1	
L2201-03	VLQ00319K100	COIL 10UH	3	
L2502	VLQ0407120M	COIL 12UH	1	
L2503	VLQ00319K100	COIL 10UH	1	
L2504	VLQ00407151K	COIL 150UH	1	
L2505	VLQ0129	COIL 300UH	1	
L2601	VLQ0407120M	COIL 12UH	1	
L2603,04	VLQ00407151K	COIL 150UH	2	
L2701,02	VLQ00319K101	COIL 100UH	2	
L2801	VLQ00319K101	COIL 100UH	1	
L2901	VLQ00319K101	COIL 100UH	1	
L64201,02	VLQ00319K101	COIL 100UH	2	
P2001,02	VJP3949C070H	CONNECTOR (MALE)	2	
P2003	VJP1231T	CONNECTOR (MALE) 4P	1	
P2004	VJP1230T	CONNECTOR (MALE) 3P	1	
P2011	VJP3172D002	CONNECTOR (MALE)	1	
P2012	VJP3172D005	CONNECTOR (MALE)	1	
P2013	VJP3172D002	CONNECTOR (MALE)	1	
P2014	VJP3172D003	CONNECTOR (MALE)	1	
P2015	VJP3518B002	CONNECTOR (MALE)	1	
P2016	VJP3518B003	CONNECTOR (MALE)	1	
P2017	VJS3801B010	CONNECTOR (FEMALE)	1	
P2018	VJP3518B002	CONNECTOR (MALE)	1	
P2019	VJP3172D002	CONNECTOR (MALE)	1	
P2020	VJP3518B003	CONNECTOR (MALE)	1	
P2021	VJP3518B002	CONNECTOR (MALE)	1	
P2022	VJP3172D004	CONNECTOR (MALE)	1	
P2024	VJP3518B002	CONNECTOR (MALE)	1	
P2025	VJP1230T	CONNECTOR (MALE) 3P	1	
P2026	VJP1236T	CONNECTOR (MALE) 9P	1	
P2030	VJP3172D003	CONNECTOR (MALE)	1	
P2032	VJP3172D004	CONNECTOR (MALE)	1	
P2033	VJS3406B015	CONNECTOR (FEMALE)	1	
P2034,35	VJS3813C017	CONNECTOR (FEMALE)	2	
P2036	VJS3406BQ10	CONNECTOR (FEMALE)	1	
P2037	VJP3125B002	CONNECTOR (MALE)	1	
P2038	VJP3172D002	CONNECTOR (MALE)	1	
Q2501,02	2SB1073-R	TRANSISTOR	2	
Q2503-06	2SD1820R	TRANSISTOR	4	
Q2507-09	2SD1119-R	TRANSISTOR	3	
Q2510-12	2SB1073-R	TRANSISTOR	3	
Q2513-15	2SD1119-R	TRANSISTOR	3	
Q2516-18	2SB1073-R	TRANSISTOR	3	
Q2601,02	2SB1073-R	TRANSISTOR	2	
Q2701	2SD1820R	TRANSISTOR	1	
Q2702	2SB1219A-R	TRANSISTOR	1	
Q2703	2SD1820R	TRANSISTOR	1	
Q2704,05	2SB1219-R	TRANSISTOR	2	
Q2706,07	2SD1820R	TRANSISTOR	2	
Q2708	2SB1219A-R	TRANSISTOR	1	
Q2901	2SB1219A-R	TRANSISTOR	1	
Q64001	2SB936A-Q	TRANSISTOR	1	
Q64002	2SD1819A-R	TRANSISTOR	1	
Q64003	2SB1073-R	TRANSISTOR	1	
Q64004	2SD1819A-R	TRANSISTOR	1	
Q64005	2SB1219A-R	TRANSISTOR	1	
Q64006	2SD1819A-R	TRANSISTOR	1	
Q64007	2SB1073-R	TRANSISTOR	1	
Q64008	2SD1624-S	TRANSISTOR	1	
Q64009	2SD1819A-R	TRANSISTOR	1	
Q64010,11	2SB1219A-R	TRANSISTOR	2	
Q64012	2SD1819A-R	TRANSISTOR	1	
Q64013	2SB1073-R	TRANSISTOR	1	
Q64014,15	2SD1624-S	TRANSISTOR	2	
Q64016	2SB1219A-R	TRANSISTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q64017	2SB1073-R	TRANSISTOR	1	
Q64018	2SD1624-S	TRANSISTOR	1	
Q64019,20	2SD1819A-R	TRANSISTOR	2	
Q64021	2SB1219A-R	TRANSISTOR	1	
Q64022	2SB1073-R	TRANSISTOR	1	
Q64023	2SB1219A-R	TRANSISTOR	1	
Q64024	2SD1819A-R	TRANSISTOR	1	
Q64025	2SB1073-R	TRANSISTOR	1	
Q64026	2SB1219A-R	TRANSISTOR	1	
Q64027	2SD1624-S	TRANSISTOR	1	
Q64028	2SB1073-R	TRANSISTOR	1	
Q64029	2SD1624-S	TRANSISTOR	1	
Q64030	2SD1819A-R	TRANSISTOR	1	
Q64031	2SD1624-S	TRANSISTOR	1	
Q64032	2SB1073-R	TRANSISTOR	1	
Q64033	2SB1219A-R	TRANSISTOR	1	
Q64034	2SD1624-S	TRANSISTOR	1	
Q64035	2SD1819A-R	TRANSISTOR	1	
Q64201	2SD1624-S	TRANSISTOR	1	
Q64202	2SB1073-R	TRANSISTOR	1	
Q64203	2SD1819A-R	TRANSISTOR	1	
QR2401,02	UN5213	TRANSISTOR-RESISTOR	2	
QR2450,51	UN5213	TRANSISTOR-RESISTOR	2	
QR2501,02	UN5213	TRANSISTOR-RESISTOR	2	
QR2703,04	UN5213	TRANSISTOR-RESISTOR	2	
QR64001	UN5114	TRANSISTOR-RESISTOR	1	
QR64002	UN5214	TRANSISTOR-RESISTOR	1	
QR64003	UN5114	TRANSISTOR-RESISTOR	1	
QR64004-06	UN5214	TRANSISTOR-RESISTOR	3	
QR64007	UN5114	TRANSISTOR-RESISTOR	1	
QR64008	UN5214	TRANSISTOR-RESISTOR	1	
QR64009	UN5114	TRANSISTOR-RESISTOR	1	
QR64010,11	UN5214	TRANSISTOR-RESISTOR	2	
QR64012,13	UN5114	TRANSISTOR-RESISTOR	2	
QR64014	UN5214	TRANSISTOR-RESISTOR	1	
QR64015,16	UN5114	TRANSISTOR-RESISTOR	2	
QR64017	UN5211	TRANSISTOR-RESISTOR	1	
QR64201-03	UN5213	TRANSISTOR-RESISTOR	3	
QR64204,05	UN5211	TRANSISTOR-RESISTOR	2	
QR64212	UN5114	TRANSISTOR-RESISTOR	1	
QR64213,14	UN5214	TRANSISTOR-RESISTOR	2	
R2106	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R2107	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R2108	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R2109	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R2110	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R2111	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2112,13	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R2114	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R2115-20	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	6	
R2121-24	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R2125	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R2126	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R2127	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R2128	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R2201,02	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R2203,04	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	2	
R2205	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R2206	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R2207,08	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R2209-12	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	4	
R2213,14	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R2221,22	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R2225	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R2226	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R2227	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R2228	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R2229	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R2230	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R2231-34	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R2236-41	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	6	
R2242	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R2243	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	

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Ref. No.	Part No.	Part Name & Description		Pcs	Remarks
R2245	ERJ3GEYJ101	M.RESISTOR CH 1/16W	100	1	
R2301	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2302	ERJ3GEYJ821	M.RESISTOR CH 1/16W	820	1	
R2303	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2304	ERJ3GEYJ563	M.RESISTOR CH 1/16W	56K	1	
R2305	ERJ3GEYJ821	M.RESISTOR CH 1/16W	820	1	
R2306	ERJ3GEYJ223	M.RESISTOR CH 1/16W	22K	1	
R2307	ERJ3GEYJ563	M.RESISTOR CH 1/16W	56K	1	
R2308	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2309	ERJ3GEYJ223	M.RESISTOR CH 1/16W	22K	1	
R2310	ERJ3GEYJ184	M.RESISTOR CH 1/16W	180K	1	
R2311	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2312	ERJ3GEYJ184	M.RESISTOR CH 1/16W	180K	1	
R2313-15	ERJ3GEYG472	M.RESISTOR CH 1/16W	4.7K	3	
R2316	ERJ3GEYJ564	M.RESISTOR CH 1/16W	560K	1	
R2317	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2318	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2319	ERJ3GEYJ563	M.RESISTOR CH 1/16W	56K	1	
R2320,21	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	2	
R2322	ERJ3GEYJ823	M.RESISTOR CH 1/16W	82K	1	
R2323	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2324	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	1	
R2326	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2327	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2328	ERJ3GEYJ334	M.RESISTOR CH 1/16W	330K	1	
R2329	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2331	ERJ3GEYJ562	M.RESISTOR CH 1/16W	5.6K	1	
R2334	ERJ3GEYJ153	M.RESISTOR CH 1/16W	15K	1	
R2336,37	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	2	
R2402	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	1	
R2404	ERJ3GEYJ563	M.RESISTOR CH 1/16W	56K	1	
R2405	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	1	
R2409	ERJ3RBD103	M.RESISTOR CH 1/16W	10K	1	
R2411	ERJ3RBD182	M.RESISTOR CH 1/16W	1.8K	1	
R2412	ERJ12YJ2R2	M.RESISTOR CH 1/2W	2.2	1	
R2415	ERJ12YJ2R2	M.RESISTOR CH 1/2W	2.2	1	
R2421	ERJ3GEYJ393	M.RESISTOR CH 1/16W	39K	1	
R2423	ERJ3GEYJ123	M.RESISTOR CH 1/16W	12K	1	
R2428,29	ERJ3GEYJ330	M.RESISTOR CH 1/16W	33	2	
R2432	ERJ3GEYJ330	M.RESISTOR CH 1/16W	33	1	
R2436	ERJ3GEYG471	M.RESISTOR CH 1/16W	470	1	
R2443	ERJ3GEYJ271	M.RESISTOR CH 1/16W	270	1	
R2450,51	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	2	
R2452	ERJ3GEYJ563	M.RESISTOR CH 1/16W	56K	1	
R2453	ERJ3RBD103	M.RESISTOR CH 1/16W	10K	1	
R2454	ERJ3RBD182	M.RESISTOR CH 1/16W	1.8K	1	
R2455,56	ERJ12YJ2R2	M.RESISTOR CH 1/2W	2.2	2	
R2457-59	ERJ3GEYJ330	M.RESISTOR CH 1/16W	33	3	
R2460	ERJ3GEYJ123	M.RESISTOR CH 1/16W	12K	1	
R2461	ERJ3GEYJ393	M.RESISTOR CH 1/16W	39K	1	
R2462	ERJ3GEYG471	M.RESISTOR CH 1/16W	470	1	
R2463	ERJ3GEYJ271	M.RESISTOR CH 1/16W	270	1	
R2465	ERJ3GEYJ563	M.RESISTOR CH 1/16W	56K	1	
R2467	ERJ3GEYJ563	M.RESISTOR CH 1/16W	56K	1	
R2468-71	ERJ3RBD563	M.RESISTOR CH 1/16W	56K	4	
R2472,73	ERJ3GEYJ562	M.RESISTOR CH 1/16W	5.6K	2	
R2474	ERJ3GEYJ683	M.RESISTOR CH 1/16W	68K	1	
R2476	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2477,78	ERJ3GEYJ273	M.RESISTOR CH 1/16W	27K	2	
R2479-82	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	4	
R2501,02	ERJ3GEYJ123	M.RESISTOR CH 1/16W	12K	2	
R2503,04	ERJ3GEYG472	M.RESISTOR CH 1/16W	4.7K	2	
R2505,06	ERJ3GEYJ681	M.RESISTOR CH 1/16W	680	2	
R2507,08	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	2	
R2509,10	ERJ8GEYJ681	M.RESISTOR CH 1/8W	680	2	
R2511	ERJ3GEYJ562	M.RESISTOR CH 1/16W	5.6K	1	
R2512	ERJ3GEYJ393	M.RESISTOR CH 1/16W	39K	1	
R2513,14	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	2	
R2515-20	ERJ8GEYJ1R0	M.RESISTOR CH 1/8W	1	6	
R2522	ERJ3GEYG471	M.RESISTOR CH 1/16W	470	1	
R2523,24	ERJ3GEYJ181	M.RESISTOR CH 1/16W	180	2	
R2525	ERJ3GEYG471	M.RESISTOR CH 1/16W	470	1	
R2526	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2527	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	1	
R2528	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2529	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2530	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2531	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2532	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	1	
R2533	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2534,35	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	2	
R2536	ERJ3GEYJ394	M.RESISTOR CH 1/16W	390K	1	
R2537,38	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	2	
R2539	ERJ3GEYJ393	M.RESISTOR CH 1/16W	39K	1	
R2540	ERJ3GEYJ394	M.RESISTOR CH 1/16W	390K	1	
R2541	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2542	ERJ3GEYG471	M.RESISTOR CH 1/16W	470	1	
R2543	ERJ3GEYG472	M.RESISTOR CH 1/16W	4.7K	1	
R2544	ERJ3GEYJ393	M.RESISTOR CH 1/16W	39K	1	
R2545	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2546	ERJ3GEYJ101	M.RESISTOR CH 1/16W	100	1	
R2601,02	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	2	
R2603	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2604,05	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	2	
R2606	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	1	
R2607	ERJ8GEYJ681	M.RESISTOR CH 1/8W	680	1	
R2608	ERJ3GEYJ153	M.RESISTOR CH 1/16W	15K	1	
R2609	ERJ3GEYJ474	M.RESISTOR CH 1/16W	470K	1	
R2610	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	1	
R2612	ERJ3RBD183	M.RESISTOR CH 1/16W	18K	1	
R2614	ERJ3GEYJ474	M.RESISTOR CH 1/16W	470K	1	
R2615	ERJ3GEYJ153	M.RESISTOR CH 1/16W	15K	1	
R2618	ERJ3GEYJ683	M.RESISTOR CH 1/16W	68K	1	
R2619	ERJ3GEYJ273	M.RESISTOR CH 1/16W	27K	1	
R2622	ERJ8GEYJ681	M.RESISTOR CH 1/8W	680	1	
R2623	ERJ3GEYJ683	M.RESISTOR CH 1/16W	68K	1	
R2624	ERJ3GEYJ273	M.RESISTOR CH 1/16W	27K	1	
R2625	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2627,28	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	2	
R2629,30	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	2	
R2701,02	ERJ3GEYJ563	M.RESISTOR CH 1/16W	56K	2	
R2703	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	1	
R2704	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2705	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	1	
R2706	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2711	ERJ3GEYJ330	M.RESISTOR CH 1/16W	33	1	
R2712	ERJ3GEYJ562	M.RESISTOR CH 1/16W	5.6K	1	
R2713	ERJ3GEYJ101	M.RESISTOR CH 1/16W	100	1	
R2714	ERJ3GEYJ683	M.RESISTOR CH 1/16W	68K	1	
R2715	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2719	ERJ3GEYJ823	M.RESISTOR CH 1/16W	82K	1	
R2720	ERJ3GEYJ393	M.RESISTOR CH 1/16W	39K	1	
R2722	ERJ3GEYJ183	M.RESISTOR CH 1/16W	18K	1	
R2723	ERJ3GEYJ683	M.RESISTOR CH 1/16W	68K	1	
R2724	ERJ3GEYJ183	M.RESISTOR CH 1/16W	18K	1	
R2725	ERJ3GEYJ681	M.RESISTOR CH 1/16W	680	1	
R2726	ERJ3GEYJ683	M.RESISTOR CH 1/16W	68K	1	
R2727	ERJ3GEYJ823	M.RESISTOR CH 1/16W	82K	1	
R2728	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	1	
R2730,31	ERJ3GEYJ821	M.RESISTOR CH 1/16W	820	2	
R2732,33	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	2	
R2734,35	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	2	
R2736	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	1	
R2801	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2802	ERJ3GEYJ101	M.RESISTOR CH 1/16W	100	1	
R2803,04	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	2	
R2806	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	1	
R2808	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	1	
R2901,02	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	2	
R2903	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	1	
R2904	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	1	
R2905	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	1	
R2906	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2907	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	1	
R2908	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	1	
R2909	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2911	ERJ3GEYJ103	M.RESISTOR CH 1/16W	10K	1	
R2912	ERJ3GEYJ104	M.RESISTOR CH 1/16W	100K	1	
R2914	ERJ3GEYG102	M.RESISTOR CH 1/16W	1K	1	
R2915	ERJ3GEY0R00	M.RESISTOR CH 1/16W	0	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R2916	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1	
R2917	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2919	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1	
R2920	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2921	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R2922,23	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R2924	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1	
R2925,26	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R2928	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2929	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R2930	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R2931	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1	
R2932-34	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R2935	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R2937	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2942	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R2944	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R2949	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R2950	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R2951	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R2952	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2959,60	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R2961	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2963	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R64001	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R64002	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R64003	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R64004	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R64005	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64006,07	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	2	
R64008	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64009	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64010	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R64011	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64012,13	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R64014,15	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	2	
R64016,17	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R64018	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64019	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64020	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64021	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R64022	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64023	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64024	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R64025,26	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R64027	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R64028	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64029,30	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R64031	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R64032-34	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	3	
R64035	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64036	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64037-39	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	3	
R64040	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R64041	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64042	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64043,44	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R64045,46	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R64047,48	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	2	
R64049	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64050	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R64051	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64052	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64053	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64054,55	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R64056	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64057,58	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R64059,60	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	2	
R64061	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64062,63	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R64064	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64065	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R64066	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64067	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64068	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R64069	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64070	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64071	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64072	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64073	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64074	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64075	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64076	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R64077,78	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R64079	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64080	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R64081	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64082,83	ERJ12YJ3R3	M.RESISTOR CH 1/2W 3.3	2	
R64084	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R64085	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64086	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64087	ERJ12YJ3R3	M.RESISTOR CH 1/2W 3.3	1	
R64088,89	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R64090	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64091-93	ERJ12YJ3R3	M.RESISTOR CH 1/2W 3.3	3	
R64094	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64095	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R64096	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64097-02	ERJ12YJ3R3	M.RESISTOR CH 1/2W 3.3	6	
R64103	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64104	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R64105,06	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R64107	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R64201	ERJ8GEYJ222	M.RESISTOR CH 1/8W 2.2K	1	
R64202	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R64203	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R64204	ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	1	
R64205	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64206	ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	1	
R64207	ERJ8GEYJ300	M.RESISTOR CH 1/8W 30	1	
R64208	ERJ8GEYJ222	M.RESISTOR CH 1/8W 2.2K	1	
R64209	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R64212-14	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R64218,19	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R64223,24	ERJ8GEYJ102	M.RESISTOR CH 1/8W 1K	2	
R64225	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64226	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R64229	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R64230	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R64231	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
TP201-05	EYF6CU	TEST POINT	5	
TP301-05	EYF6CU	TEST POINT	5	
TP701-04	EYF6CU	TEST POINT	4	
TP2401	EYF6CU	TEST POINT	1	
TP2403,04	EYF6CU	TEST POINT	2	
TP2451	EYF6CU	TEST POINT	1	
TP2453,54	EYF6CU	TEST POINT	2	
TP2801	EYF6CU	TEST POINT	1	
TP2903	EYF6CU	TEST POINT	1	
TP2906	EYF6CU	TEST POINT	1	
TPG201	EYF6CU	TEST POINT	1	
VR2201	EVM7JGA00B15	V.RESISTOR 100K	1	
X2101	VSX0821	CRYSTAL OSCILLATOR	1	
X2201	VSX0645	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VSC4607	SHIELD CASE	1	
	VJF1310	CONNECTOR HOLDER	2	
	VEE2795	VIDEO EARTH	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E16	VEK7793	MOTOR P.C.BOARD	1	(RTL)					
		MISCELLANEOUS							
	VJP1230T	3P CONNECTOR	1						
■ E17	VEK8619	LED HOLDER P.C.BOARD	1	(RTL)					
		MISCELLANEOUS							
	VMD2528	LED HOLDER	1						
	LN159.VT2	LED	1						
	VEE0F64	LED CABLE	1						
■ E18	VEK7726	REEL DRIVE SENSOR P.C.BOARD	1	(RTL)					
		MISCELLANEOUS							
	ON1004-R	PHOTO INTERRUPTER	2						
	VEE9788	REEL SENSOR CABLE	1						
	ERDS2TJ221	C.RESISTOR 1/4W 220	1						